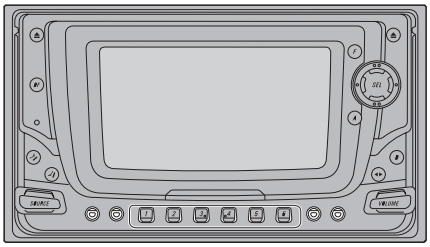
Service Manual

Pioneer

FH-P6600R/EW



ORDER NO.
CRT2502

MULTI-CD/MD CONTROL DSP HIGH POWER CD CASSETTE PLAYER WITH RDS TUNER

FH-P6600R EW

MULTI-CD/MD CONTROL DSP HIGH POWER CD CASSETTE PLAYER WITH FM/AM TUNER

FH-P6600 ES

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech. Module	Remarks
CX-1011	CRT2406	3L	Cassette Mech. Module:Circuit Description, Mech.Description, Disassembly
CX-958	CRT2423	S8.1	CD Mech. Module:Circuit Description, Mech.Description, Disassembly

● **Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.**

● **Three-color LEDs: The LCD backlight uses Hitachi's 3-color LEDs (NSCM315C) to control voltages for RGB reproduction. By individually controlling the voltages for red, green and blue LEDs, these three colors are mixed to reproduce ten colors.**

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K-ZZU. MAY 2000 Printed in Japan

● **CD Player Service Precautions**

1. For pickup unit(CXX1285) handling, please refer to"Disassembly"(see page 87).
   During replacement, handling precautions shall be taken to prevent an electrostatic discharge(protection by a short pin).
2. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.
3. Please checking the grating after changing the service pickup unit(see page 81).

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely; you should not risk trying to do so and refer the repair to a qualified service technician.

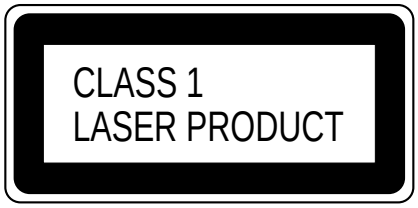
1. Safety Precautions for those who Service this Unit.

- **When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.**

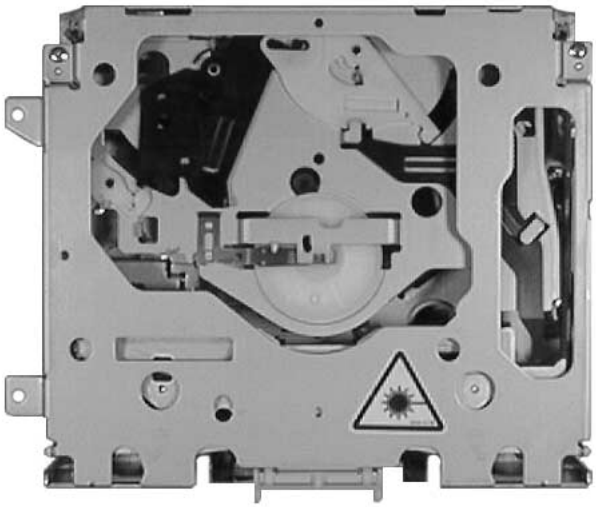
Caution:

1. During repair or tests, minimum distance of 13cm from the focus lens must be kept.
2. During repair or tests, do not view laser beam for 10 seconds or longer.

2. A "CLASS 1 LASER PRODUCT" label is affixed to the bottom of the player.



3. The triangular label is attached to the mechanism unit frame.

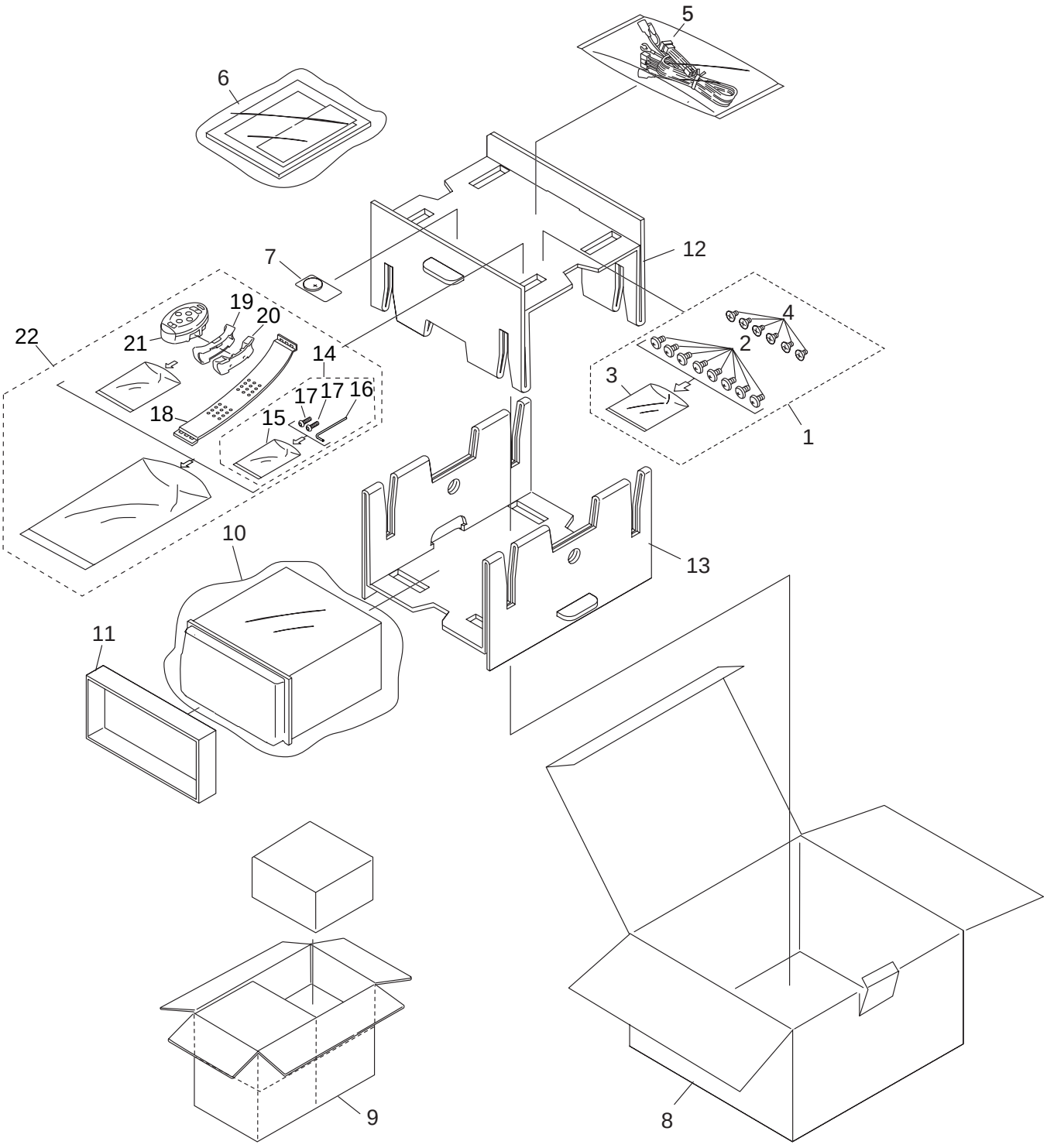


4. Specifications of Laser Diode

Specifications of laser radiation fields to which human access is possible during service.
Wavelength = 800 nanometers

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING(FH-P6600R/EW)



NOTE:

- Parts marked by "*"are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.

● PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw Assy	CEA2189
	2	Screw	BMZ50P060FMC
*	3	Polyethylene Bag	CEG-127
	4	Screw	CMZ50P060FMC
	5	Cord Assy	CDE6404
	6-1	Polyethylene Bag	CEG1116
	6-2	Owner's Manual	CRD3237
	6-3	Owner's Manual	CRD3238
	6-4	Installation Manual	CRD3239
	6-5	Installation Manual	CRD3240
	6-6	Caution Card	CRP1208
	6-7	Passport	CRY1013
*	6-8	Warranty Card	CRY1157
	7	Battery	CEX1030
	8	Carton	CHG4056
	9	Contain Box	CHL4056
	10	Cover	CEG1074
	11	Protector	CHP2227
	12	Protector	CHP2272
	13	Protector	CHP2273
	14	Screw Assy	CZE3169
*	15	Polyethylene Bag	CEG-127
*	16	Hexagonal Wrench	CZE3176
*	17	Screw	RMZ30H060FBK
	18	Belt	CZN6416
	19	Holder Assy	CZX3172
	20	Holder Assy	CZX3173
	21	Remote Control Assy	CZX3218
	22	Remote Control Assy	CXB2636

As materials for on-site adjustment, the following items are contained in the package:

CRD3237 (Owner's manual in English, Italian and Spanish) *A

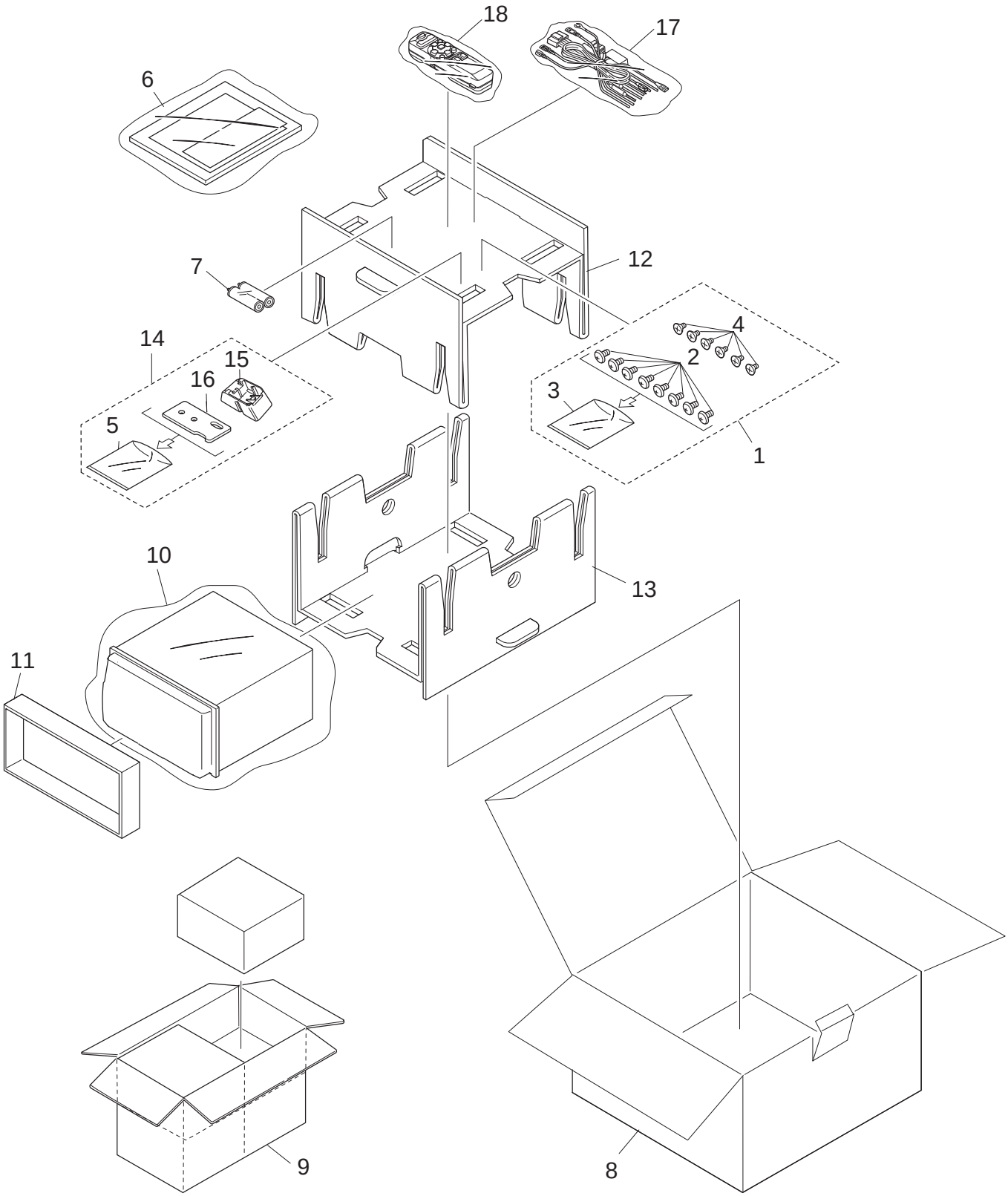
CRD3239 (Installation manual in English, Italian and Spanish) *A

CRD3238 (Owner's manual in French, Dutch and German) *B

CRD3240 (Installation manual in French, Dutch and German) *B

When the products are shipped from our factory, the above manuals are not included. A pair of manuals (*A or *B) will be attached to the product package on the site (PEE) according to the language used in the country or area to which the product is delivered.

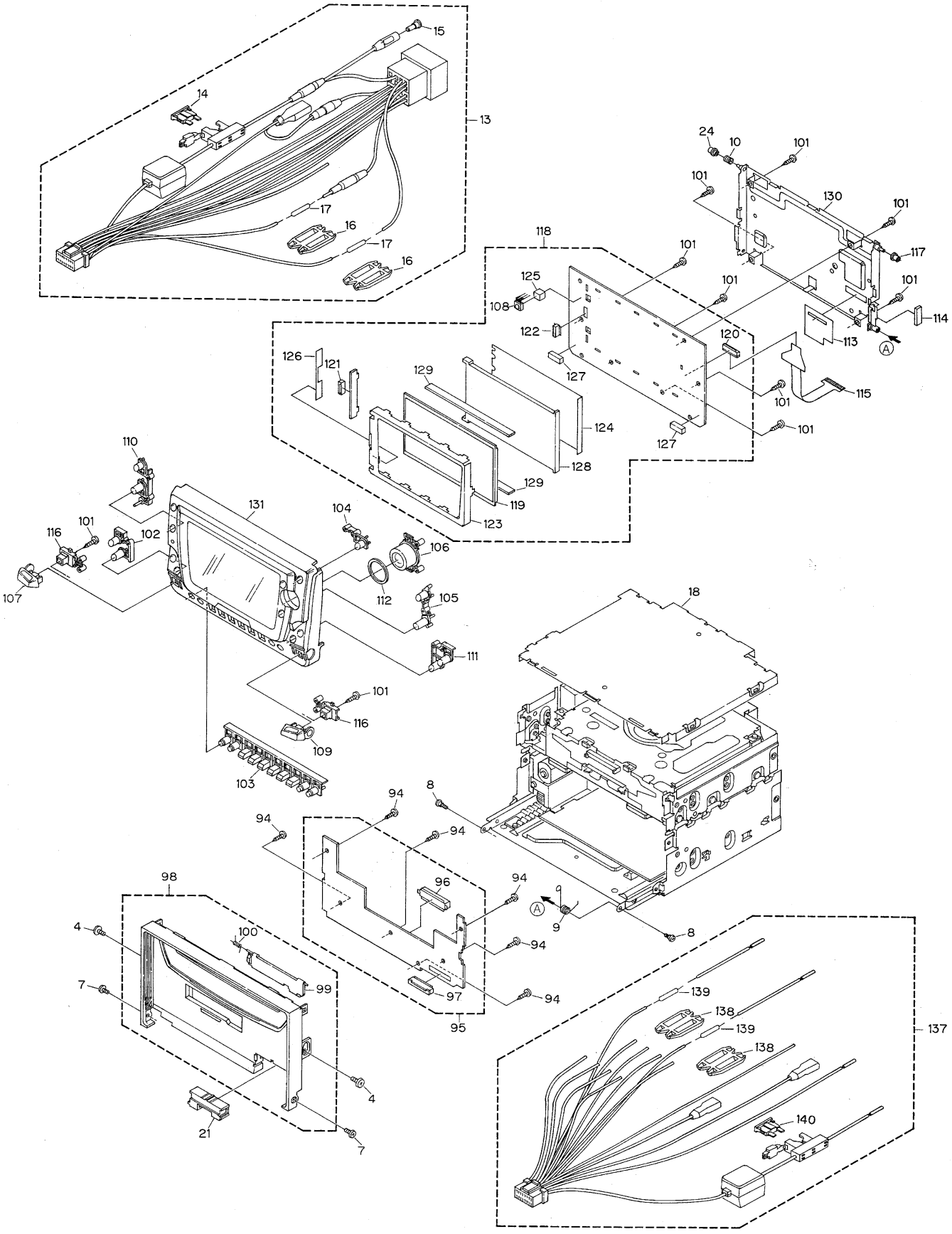
2.2 PACKING(FH-P6600/ES)



● PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw Assy	CEA2189
	2	Screw	BMZ50P060FMC
*	3	Polyethylene Bag	CEG-127
	4	Screw	CMZ50P060FMC
	5	Polyethylene Bag	CZE3188
	6-1	Polyethylene Bag	CEG1116
	6-2	Owner's Manual	CRD3241
	6-3	Installation Manual	CRD3242
	7	Battery	CEX1006
	8	Carton	CHG4057
	9	Contain Box	CHL4057
	10	Cover	CEG1074
	11	Protector	CHP2227
	12	Protector	CHP2272
	13	Protector	CHP2273
	14	Base Assy	CEA2426
*	15	Base	CNS5031
*	16	Sheet	CZA3371
	17	Cord Assy	CDE6257
	18	Remote Control Assy	CXB3877

2.3 EXTERIOR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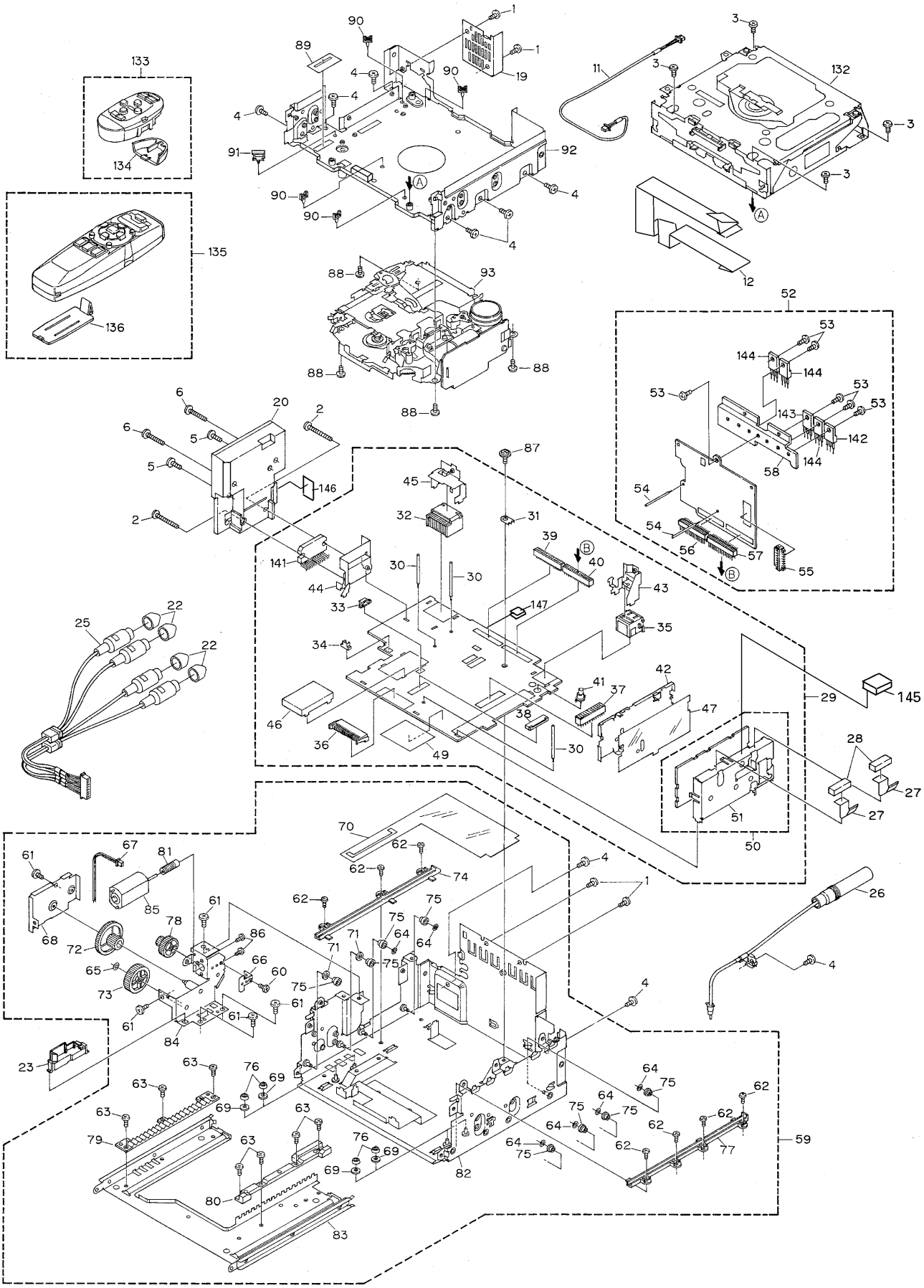


(1) **EXTERIOR SECTION PARTS LIST**

Mark	No.	Description	Part No.
	1	Screw	BMZ26P060FMC
	2	Screw	BMZ26P250FMC
	3	Screw	BSZ26P060FMC
	4	Screw	BSZ30P060FMC
	5	Screw	BSZ30P080FMC
	6	Screw	BSZ30P160FMC
	7	Screw(M2x2.5)	CBA1085
	8	Screw	CBA1431
	9	Spring	CBH2092
	10	Spring	CBH2355
	11	Cord	CDE6262
	12	Cable	CDE6272
	13	Cord Assy	See Contrast table(2)
	14	Fuse(10A)	See Contrast table(2)
	15	Cap	See Contrast table(2)
	16	Cap	See Contrast table(2)
	17	Resistor	See Contrast table(2)
	18	Case	CNB2556
	19	Cover	CNC8924
	20	Heat Sink	CNR1580
	21	Cover	CNS5007
	22	Cap	CNV2680
	23	Holder	CNV6248
	24	Roller	CNV6292
	25	Cord	CDE6260
	26	Antenna Cable	CDH1284
	27	Holder	CNC9006
	28	Cushion	CNM6893
	29	Audio Amp Unit	See Contrast table(2)
	30	Clamper	CEF1007
	31	Terminal(CN401)	CKF1059
	32	Plug(CN853)	CKM1278
	33	Connector(CN251)	CKS2191
	34	Connector(CN801)	CKS3124
	35	Connector(CN131)	CKS3408
	36	Plug(CN854)	CKS3540
	37	Connector(CN111)	CKS3568
	38	Connector(CN141)	CKS4281
	39	Connector(CN856)	CKS4322
	40	Connector(CN857)	CKS4322
	41	Pin Jack(CN451)	CKX1046
	42	Holder	CNC7533
	43	Holder	CNC8724
	44	Holder	CNC8725
	45	Holder	CNC8727

Mark	No.	Description	Part No.
	46	Case	CNC8873
	47	Insulator	CNM5967
	48	•••••	
	49	Insulator	See Contrast table(2)
	50	FM/AM Tuner Unit	See Contrast table(2)
	51	Holder	CNC7532
	52	Power Supply Unit	See Contrast table(2)
	53	Screw	BMZ26P060FMC
	54	Clamper	CEF1007
	55	Plug(CN901)	CKS1242
	56	Connector(CN902)	CKS4321
	57	Connector(CN903)	CKS4321
	58	Heat Sink	CNR1579
	59	Drive Mechanism Assy	CXB5497
	60	Screw	BMZ20P025FMC
	61	Screw	BSZ30P060FMC
	62	Screw(M2x2.5)	CBA1521
	63	Screw(M2x2.5)	CBA1521
	64	Washer	CBF1038
	65	Washer	CBF1039
	66	Spring	CBL1493
	67	Cord	CDE6282
	68	Bracket	CNC8737
	69	Spacer	CNM6202
	70	Insulator	CNM6661
	71	Spacer	CNM6923
	72	Gear	CNV5297
	73	Gear	CNV5298
	74	Guide	CNV6291
	75	Roller	CNV5301
	76	Roller	CNV5814
	77	Guide	CNV6399
	78	Gear	CNV6164
	79	Rack	CNV5299
	80	Rack	CNV6149
	81	Gear	CNV6401
	82	Chassis Unit	CXB5319
	83	Frame Unit	CXB5321
	84	Bracket Unit	CXB5422
*	85	Motor	CXM1114
	86	Screw	JFZ20P025FMC
	87	Screw	ISS26P055FUC
	88	Screw	BSZ26P060FMC
	89	Insulator	CNM6666
	90	Clamper	CNV1251

Mark	No.	Description	Part No.
	91	Clamper	CNV6309
	92	Chassis Unit	CXB5420
	93	Cassette Mechanism Module	EXK4020
	94	Screw	BPZ20P080FMC
	95	Panel PCB Unit	See Contrast table(2)
	96	Socket(CN1101)	CKS3553
	97	Connector(CN1102)	CKS3770
	98	Panel Unit	CXB5437
	99	Door	CAT2150
	100	Spring	CBH1371
	101	Screw	BPZ20P080FMC
	102	Button(ANGLE)	CAC6533
	103	Button(1-6,etc)	CAC6534
	104	Button(EJECT)	CAC6535
	105	Button(F,A)	CAC6537
	106	Button(SEL)	CAC6538
	107	Lever(SOURCE)	CAC6539
	108	IC(IC1903)	SBX8035-H
	109	Lever(VOLUME)	CAC6540
	110	Button(CD EJ)	CAC6541
	111	Button(DSP,BAND)	CAC6542
	112	Cushion	CNM6646
	113	Insulator	CNM6647
*	114	Cushion	CNM6938
	115	PCB	CNP5309
	116	Holder	CNV6136
	117	Roller	CNV6172
	118	Flap PCB Unit	See Contrast table(2)
	119	LCD(LCD1901)	CAW1593
	120	Connector(CN1901)	CKS3774
	121	Connector(CN1201)	CKS4274
	122	Connector(CN1902)	CKS4275
	123	Holder	CNC8699
	124	Sheet	CNM6642
	125	Spacer	CNM6644
	126	Insulator	CNM6719
	127	Spacer	CNM6940
	128	Lighting Conductor	CNV6133
	129	Connector	CNV6135
	130	Case Unit	CXB5262
	131	Grille Unit	See Contrast table(2)
	132	CD Mechanism Module(S8TX)	CXK5210
	133	Remote Control Assy	See Contrast table(2)
	134	Cover	See Contrast table(2)
	135	Remote Control Assy	See Contrast table(2)

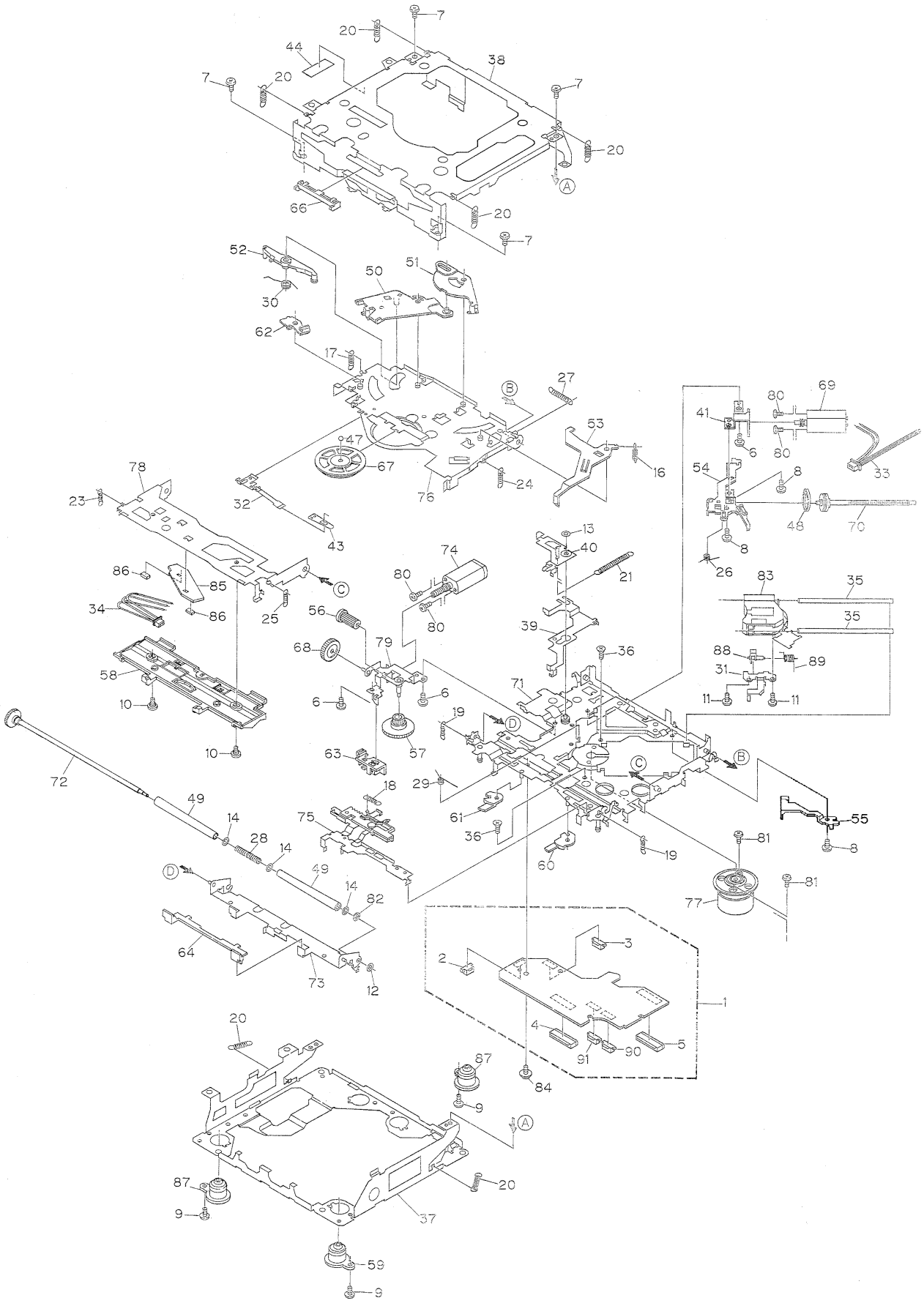
Mark	No.	Description	Part No.
	136	Battery Cover	See Contrast table(2)
	137	Cord Assy	See Contrast table(2)
	138	Cap	See Contrast table(2)
	139	Resistor	See Contrast table(2)
	140	Fuse(10A)	See Contrast table(2)
	141	IC(IC351)	PAL005A
	142	IC(IC903)	SBX8035-H
	143	IC9IC907)	PQ20RX1S-L
	144	Transistor(Q912,Q915,Q921)	2SD2396
	145	Cushion	CNM6870
	146	Cushion	CNM6997
	147	Spacer	CNM7014

(2) CONTRAST TABLE

FH-P6600R/EW and FH-P6600/ES are constructed same except for the following:

Mark No.	Symbol and Description	Part No.	
		FH-P6600R/EW	FH-P6600/ES
13	Cord Assy	CDE6404	Not used
14	Fuse(10A)	CEK1136	Not used
15	Cap	CKX-003	Not used
16	Cap	CNS1472	Not used
17	Resistor	RS1/2PMF102J	Not used
29	Audio Amp Unit	CWM7006	CWM7001
49	Insulator	CNM6034	Not used
50	FM/AM Tuner Unit	CWE1500	CWE1501
52	Power Supply Unit	CWM7007	CWM7002
95	Panel PCB Unit	CWM7008	CWM7003
118	Flap PCB Unit	CWM7009	CWM7004
131	Grille Unit	CXB6482	CXB6483
133	Remote Control Assy	CZX3218	Not used
134	Cover	CZN6410	Not used
135	Remote Control Assy	Not used	CXB3877
136	Battery Cover	Not used	CNS5032
137	Cord Assy	Not used	CDE6257
138	Cap	Not used	CNS1472
139	Resistor	Not used	RS1/2PMF102J
140	Fuse(10A)	Not used	CEK1136

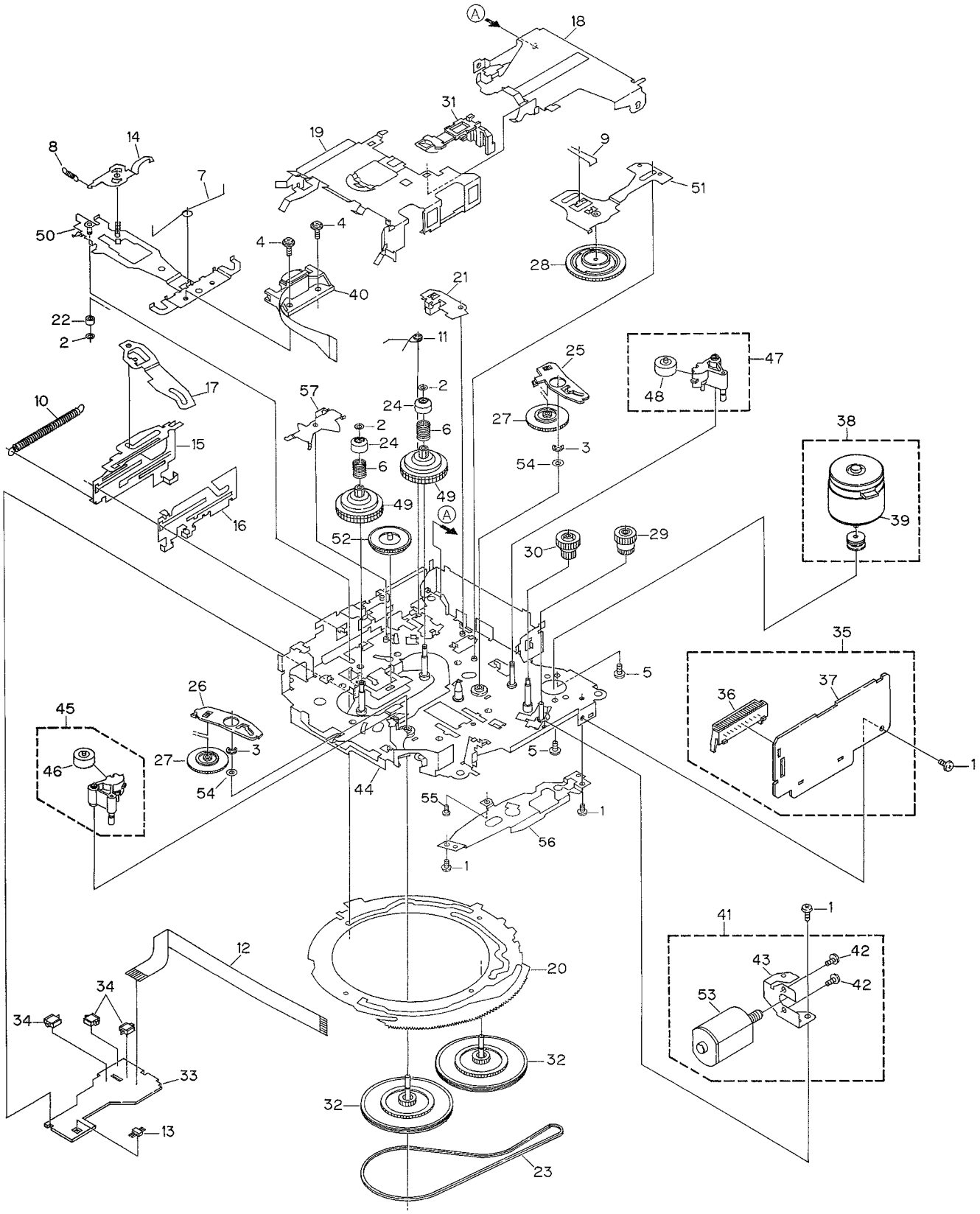
2.4 CD MECHANISM MODULE



● CD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Control Unit(S8TX)	CWX2434
	2	Connector(CN802)	CKS2192
	3	Connector(CN801)	CKS2193
	4	Connector(CN701)	CKS4281
	5	Connector(CN101)	CKS3486
	6	Screw	BMZ20P030FMC
	7	Screw	BSZ20P040FMC
	8	Screw(M2x3)	CBA1077
	9	Screw(M2x5)	EBA1028
	10	Screw(M2x2)	CBA1523
	11	Screw(M2x4)	CBA1362
	12	Washer	CBF1037
	13	Washer	CBF1038
	14	Washer	CBF1060
	15	•••••	
	16	Spring	CBH2079
	17	Spring	CBH2117
	18	Spring	CBH2314
	19	Spring	CBH2110
	20	Spring	CBH2282
	21	Spring	CBH2318
	22	•••••	
	23	Spring	CBH2324
	24	Spring	CBH2118
	25	Spring	CBH2161
	26	Spring	CBH2163
	27	Spring	CBH2189
	28	Spring	CBH2249
	29	Spring	CBH2260
	30	Spring	CBH2262
	31	Bracket	CNC8568
	32	Spring	CBL1369
	33	Connector	CDE5531
	34	Connector	CDE5532
	35	Shaft	CLA3304
	36	Screw(M2.6x6)	CBA1458
	37	Frame	CNC8682
	38	Frame	CNC8892
	39	Lever	CNC8694
	40	Arm	CNC8663
	41	Bracket	CNC8567
	42	•••••	
	43	Spacer	CNM3315
	44	Sheet	CNM6659
	45	•••••	
	46	•••••	
	47	Ball	CNR1189
	48	Belt	CNT1086
	49	Roller	CNV4509
	50	Arm	CNV6102
	51	Arm	CNV6094
	52	Arm	CNV5248
	53	Arm	CNV6095
	54	Guide	CNV5254
	55	Guide	CNV5255
	56	Gear	CNV5257
	57	Gear	CNV5256
	58	Guide	CNV6176
	59	Damper	CNV6010
	60	Arm	CNV6096
	61	Arm	CNV6031
	62	Arm	CNV6211
	63	Guide	CNV6012
	64	Guide	CNV5510
	65	•••••	
	66	Guide	CNV5751
	67	Clamper	CNV6013
	68	Gear	CNV5813
	69	Motor Unit(M1)	CXB5827
	70	Screw Unit	CXB4726
	71	Chassis Unit	CXB5811
	72	Gear Unit	CXB4728
*	73	Arm Unit	CXB5753
	74	Motor Unit(M2)	CXB5828
	75	Lever Unit	CXB6049
	76	Arm Unit	CXB4731
	77	Motor Unit(M3)	CXB5829
	78	Arm Unit	CXB5689
	79	Bracket Unit	CXB4795
	80	Screw	JFZ20P025FMC
	81	Screw	JGZ17P025FZK
	82	Washer	YE20FUC
	83	Pickup Unit(Service)(P8)	CXX1285
	84	Screw	IMS26P030FMC
*	85	Gathering PCB	CNX2982
	86	Photo Transistor(Q1, 2)	CPT230SX-TU
	87	Damper	CNV6011
	88	Rack	CNV6014
	89	Spring	CBH2315
	90	Connector(CN601)	CKS4282
	91	Connector(CN602)	CKS2191

2.5 CASSETTE MECHANISM MODULE

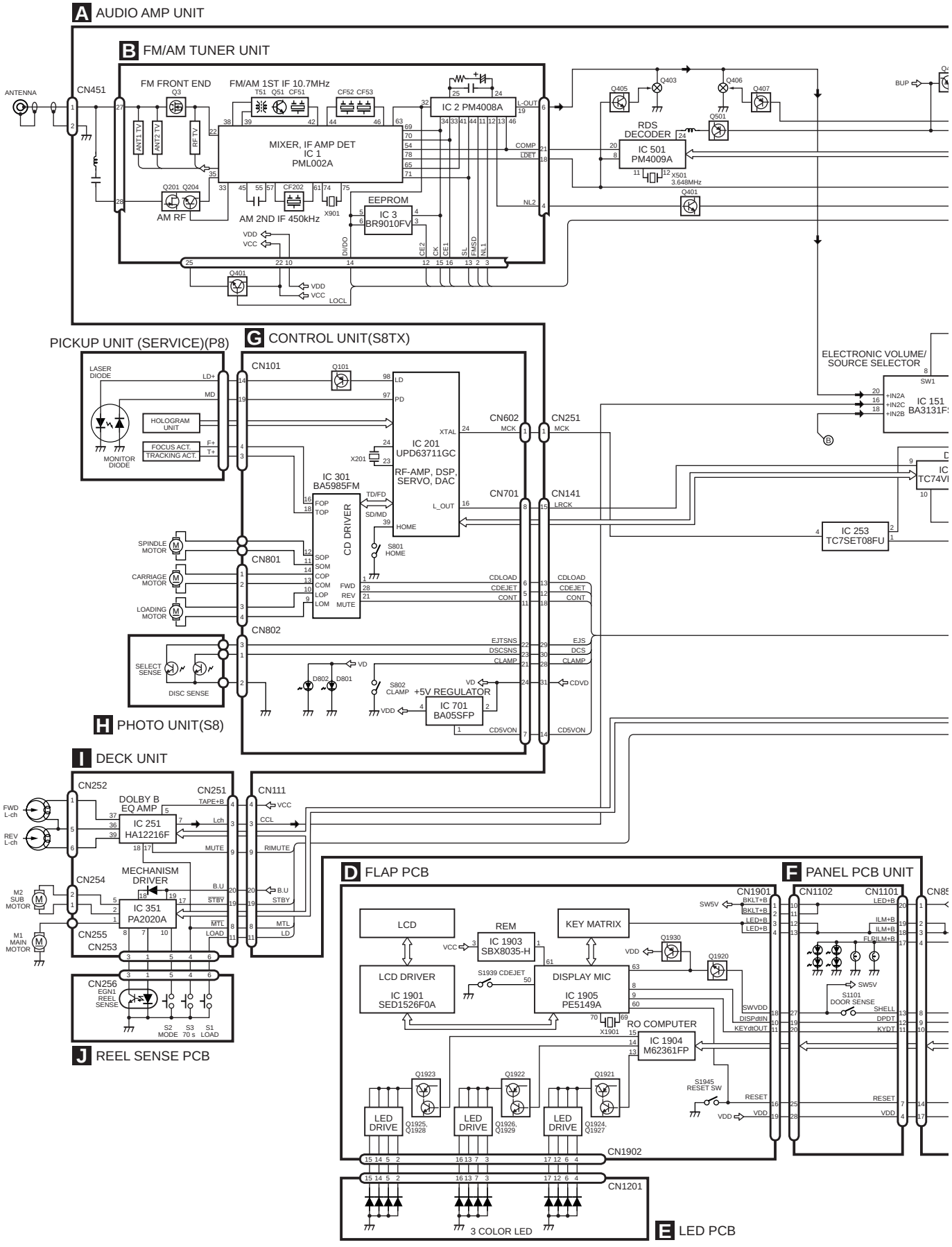


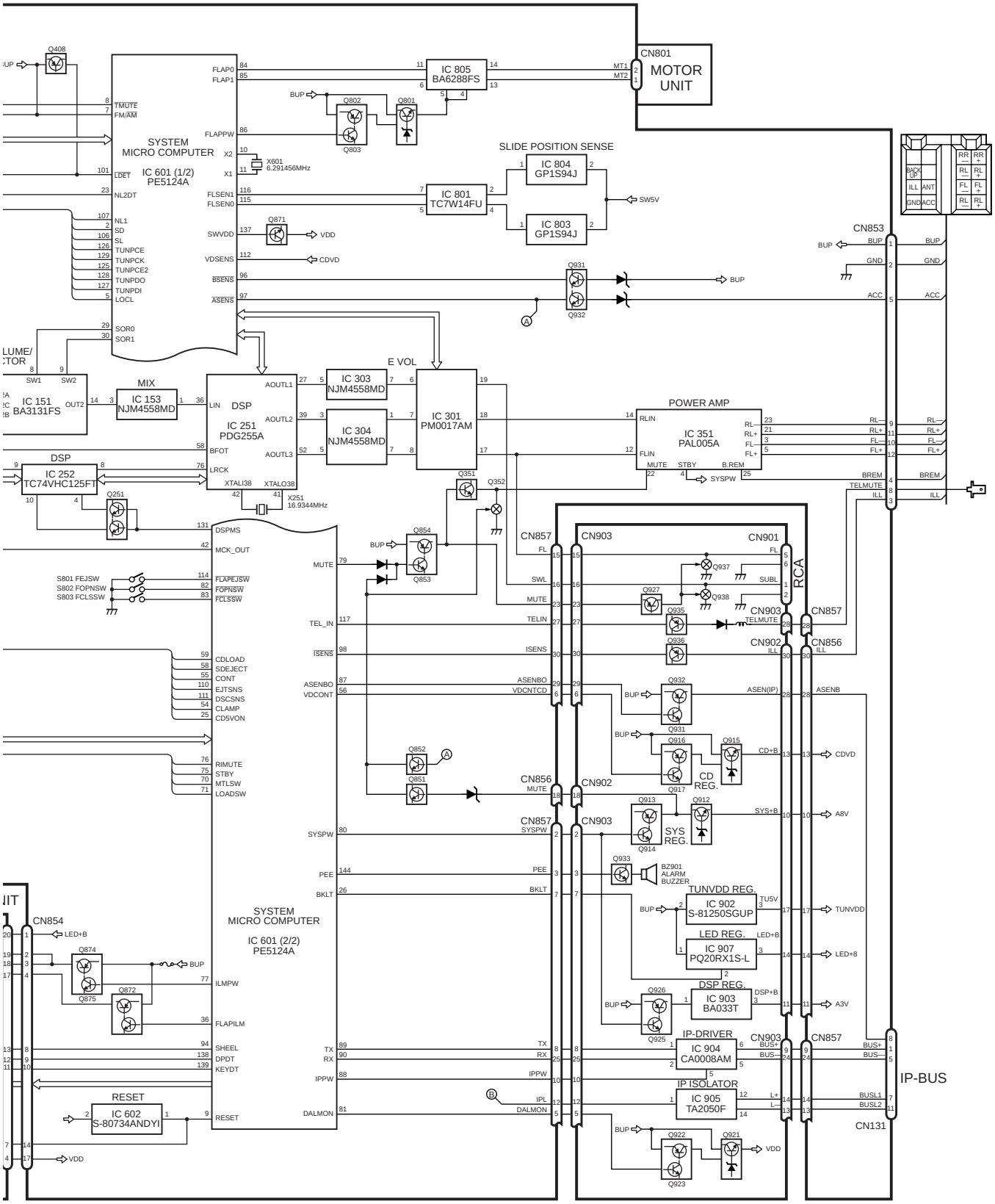
● CASSETTE MECHANISM MODULE SECTION PARTS LIST

Mark No.	Description	Part No.
1	Screw	BSZ20P040FMC
2	Washer	CBF1037
3	Washer	CBG1003
4	Screw	EBA1028
5	Screw	CBA1037
6	Spring	EBH1531
7	Spring	EBH1624
8	Spring	EBH1625
9	Spring	EBH1626
10	Spring	EBH1627
11	Spring	EBH1629
12	Cord	EDD1024
13	Photo-reflector(EGN1)	EGN1004
14	Arm	ENC1526
15	Lever	ENC1530
16	Lever	ENC1531
17	Arm	ENC1532
18	Frame	ENC1533
19	Holder	ENC1534
20	Gear	ENC1535
21	Arm	ENC1536
22	Roller	ENR1040
23	Belt	ENT1027
24	Collar	ENV1508
25	Arm	ENV1539
26	Arm	ENV1540
27	Gear	ENV1544
28	Gear	ENV1547
29	Gear	ENV1548
30	Worm Wheel	ENV1550
31	Lever	ENV1551
32	Flywheel	ENV1554
33	Gathering PCB	ENX1054
34	Switch(S1,S2,S3)	ESG1007
35	Deck Unit	EWM1029
36	Plug(CN251)	CKS3540
37	PCB	ENP1184
38	Motor Unit(M1)	EXA1490
39	Motor	EXM1027
40	Head Assy(HD1)	EXA1589
41	Motor Unit(M2)	EXA1580
42	Screw	BMZ20P022FMC
43	Bracket	ENC1528
44	Chassis Unit	EXA1582
45	Pinch Holder Unit	EXA1584
46	Pinch Roller	ENV1518
47	Pinch Holder Unit	EXA1583
48	Pinch Roller	ENV1518
49	Reel Unit	EXA1585
50	Head Base Unit	EXA1586
51	Lever Unit	EXA1587
52	Gear Unit	EXA1588
53	Motor Unit(Service)	EXX1055
54	Washer	HBF-179
55	Screw	CBA1250
56	Bracket	ENC1542
57	Arm	ENC1537

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM(EW model)

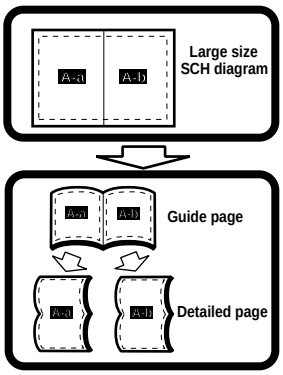


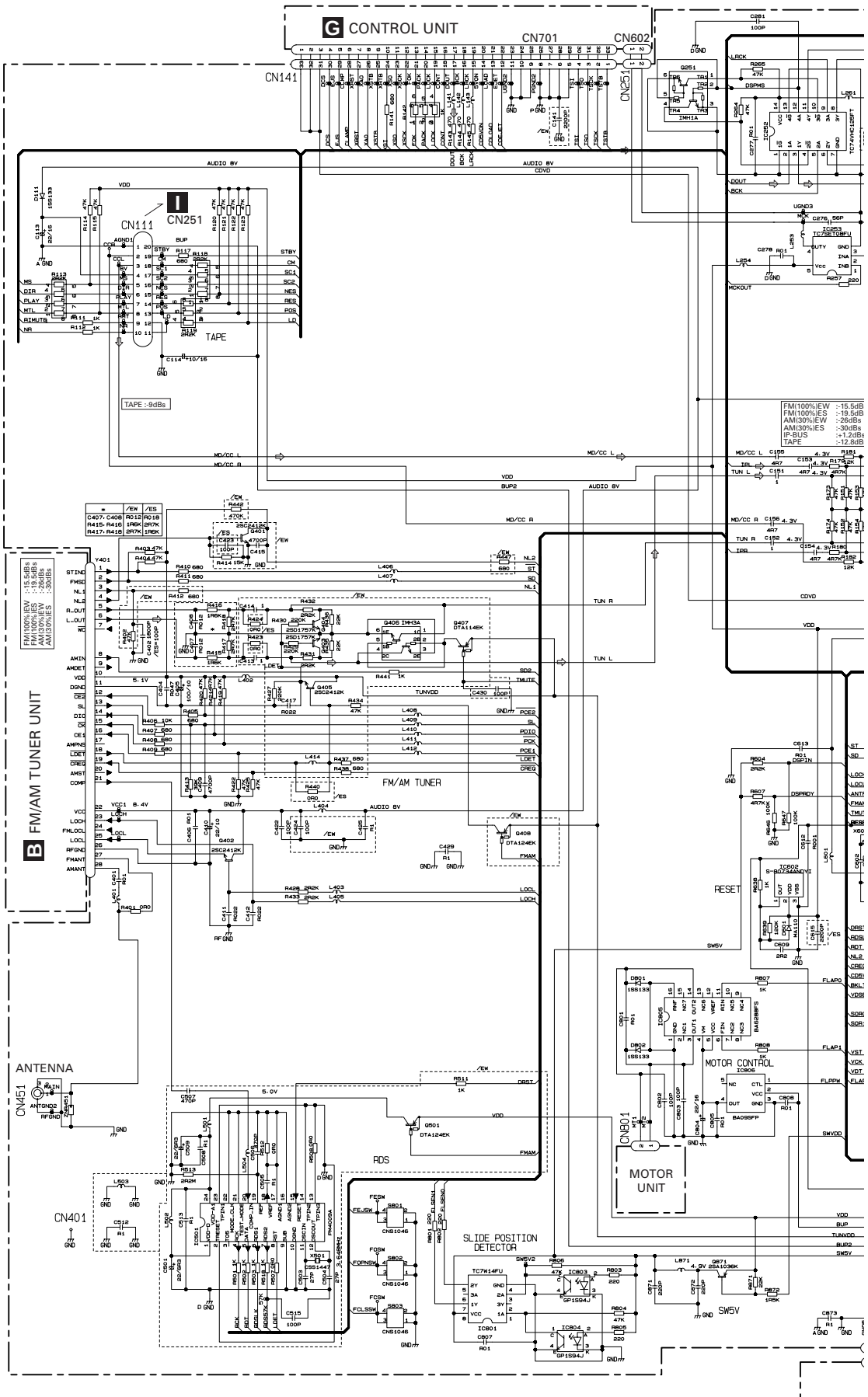

CN801
MOTOR UNIT
IC 805 BA6288FS
SYSTEM MICRO COMPUTER
IC 601 (1/2) PE5124A
X601 6.291456MHz
SLIDE POSITION SENSE
IC 804 GP1S94J
IC 803 GP1S94J
IC 801 TC7W14FU
SW5V
VDD
CDVD
BUP
CN853
BACK UP
ILL
ANT
GND
ACC
E VOL
IC 303 NJM4558MD
IC 304 NJM4558MD
IC 301 PM0017AM
MIX
IC 153 NJM4558MD
IC 151 BA3131FS
DSP
IC 251 PDG255A
IC 252 TC74VHC125FT
X251 16.9344MHz
POWER AMP
IC 351 PAL005A
SYSPW
BREM
TELMUTE
ILL
RCA
CN857
CN903
CN901
CN902
CN856
SUBL
TELIN
ISENS
ASENBO
VDCONT
ASEN(IP)
ASENB
CD REG.
SYS REG.
CD+B
SYS+B
A8V
CDVD
TUNVDD REG.
IC 902 S-81250SGUP
TUNVDD
LED REG.
IC 907 PQ20RX1S-L
LED+B
LED+8
DSP REG.
IC 903 BA033T
DSP+B
A3V
IP-DRIVER
IC 904 CA0008AM
IP ISOLATOR
IC 905 TA2050F
IP-BUS
CN131
BUSL1
BUSL2
BZ901 ALARM BUZZER
SYSTEM MICRO COMPUTER
IC 601 (2/2) PE5124A
CN854
LED+B
ILMPW
FLAPILM
SHEEL
DPDT
KEYDT
RESET
IC 602 S-80734ANDYI
TMUTE
FM/AM
LDET
NL2DT
NL1
SD
SL
TUNPCE
TUNPCK
TUNPCE2
TUNPDO
TUNPDI
LOCL
SOR0
SOR1
SW1
SW2
DSPMS
MCK_OUT
FLAPEJSW
FOPNSW
FCLSSW
CDLOAD
SDEJECT
CONT
EJTSNS
DSCSNS
CLAMP
CDSVON
RIMUTE
STBY
MTLSW
LOADSW
MUTE
TEL_IN
ISENS
ASENBO
VDCONT
SYSPW
PEE
BKLT
TX
RX
IPPW
IPL
DALMON
RESET
S801 FEJSW
S802 FOPNSW
S803 FCLSSW
C POWER SUPPLY UNIT

3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

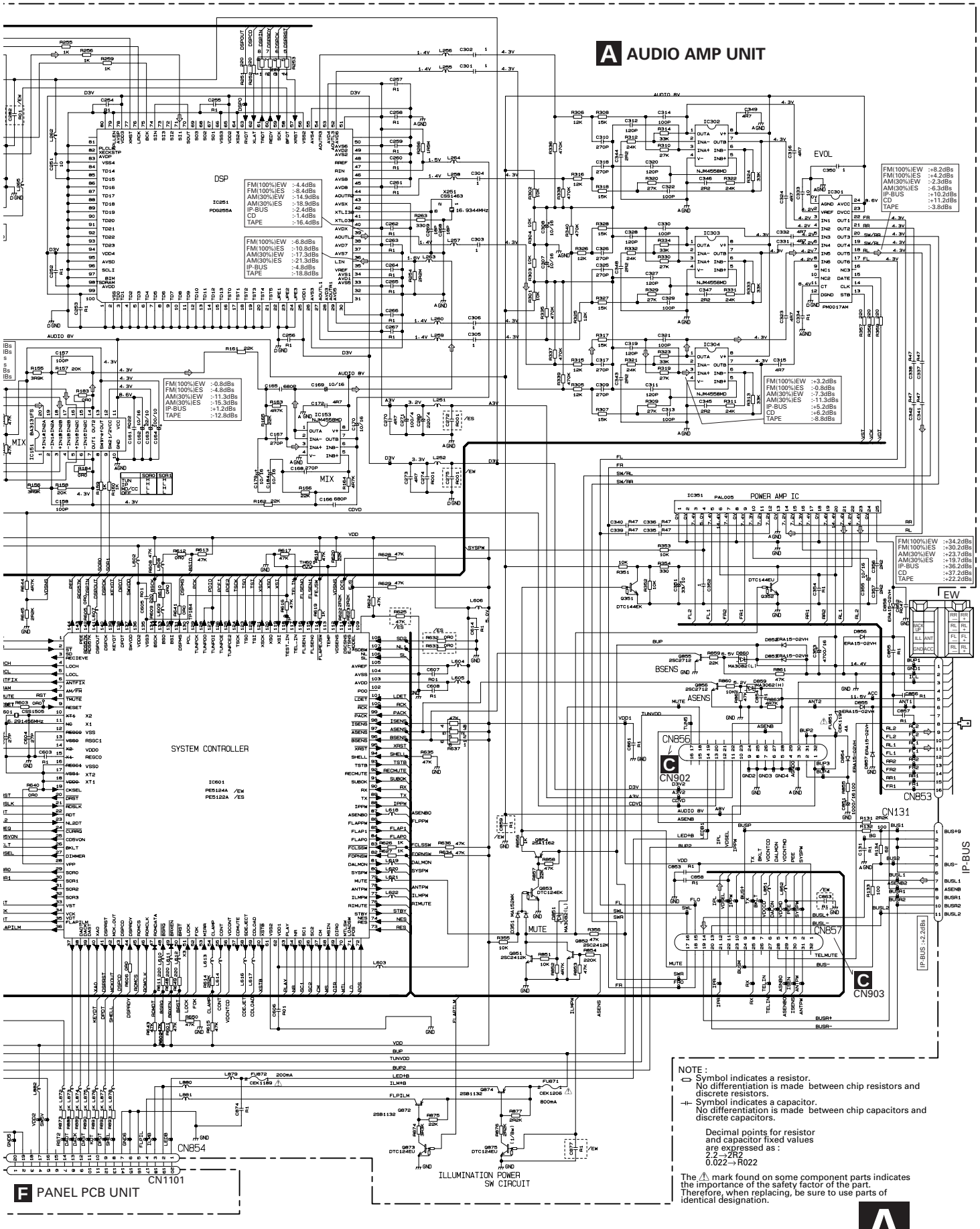
A-a

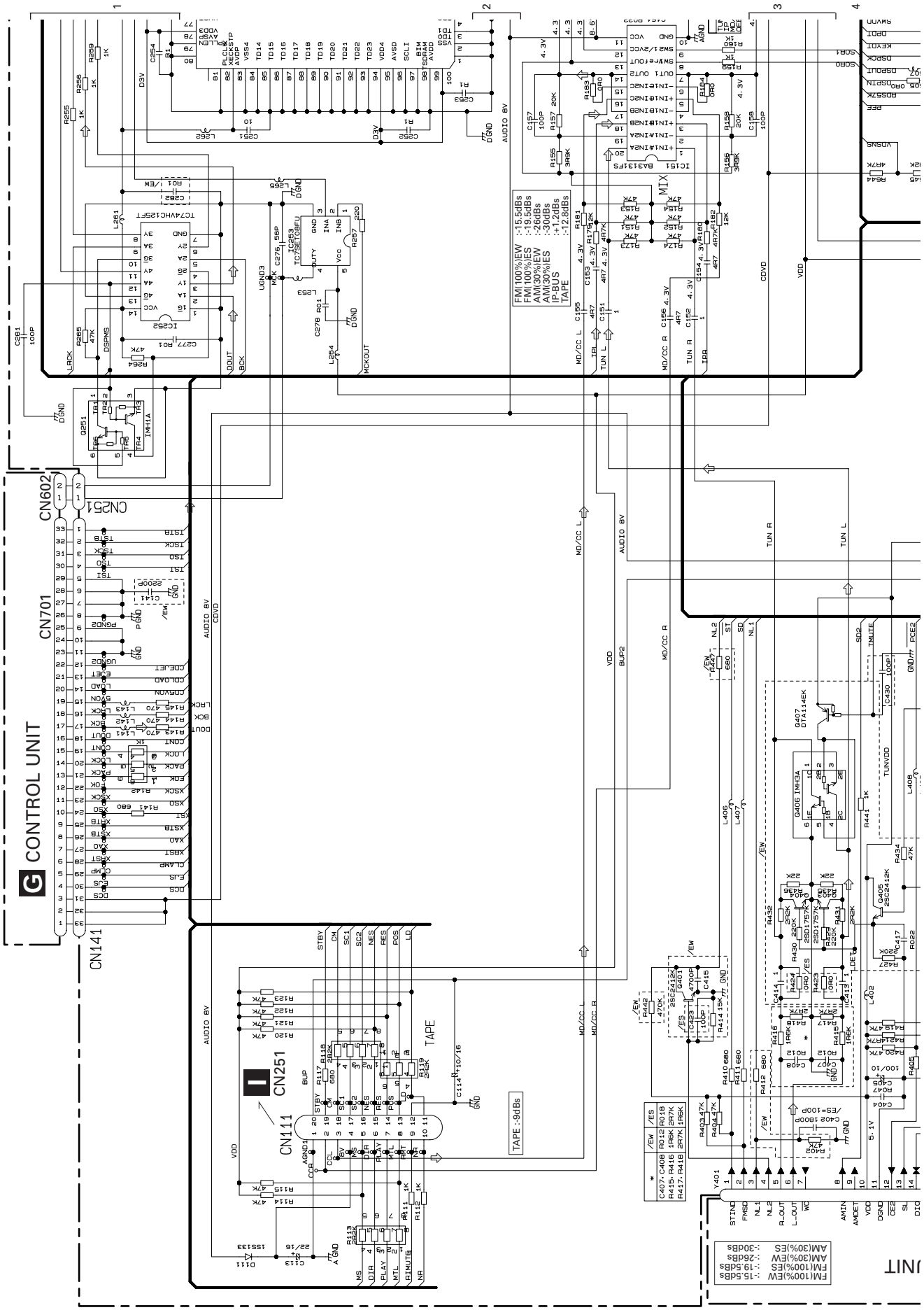
Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

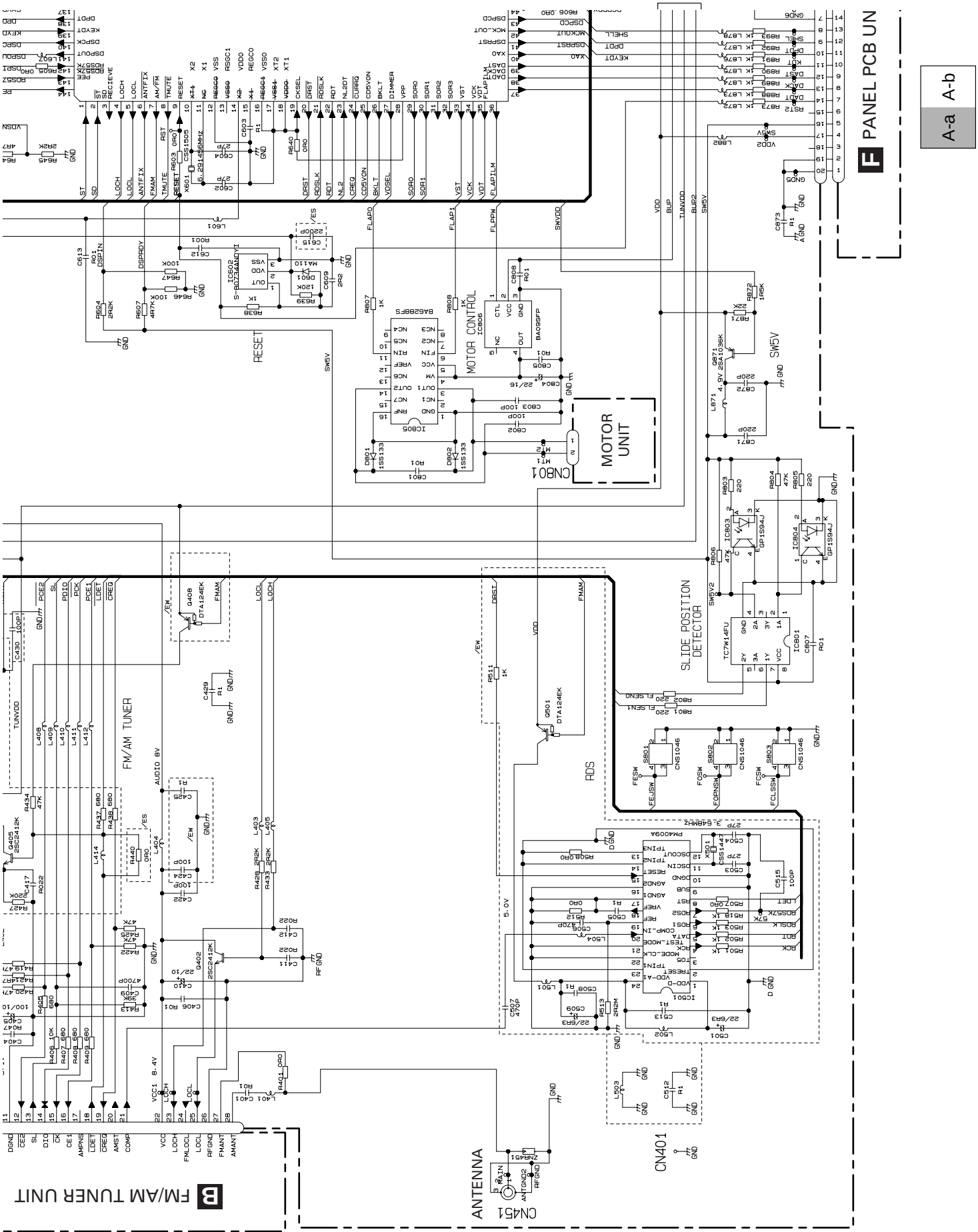




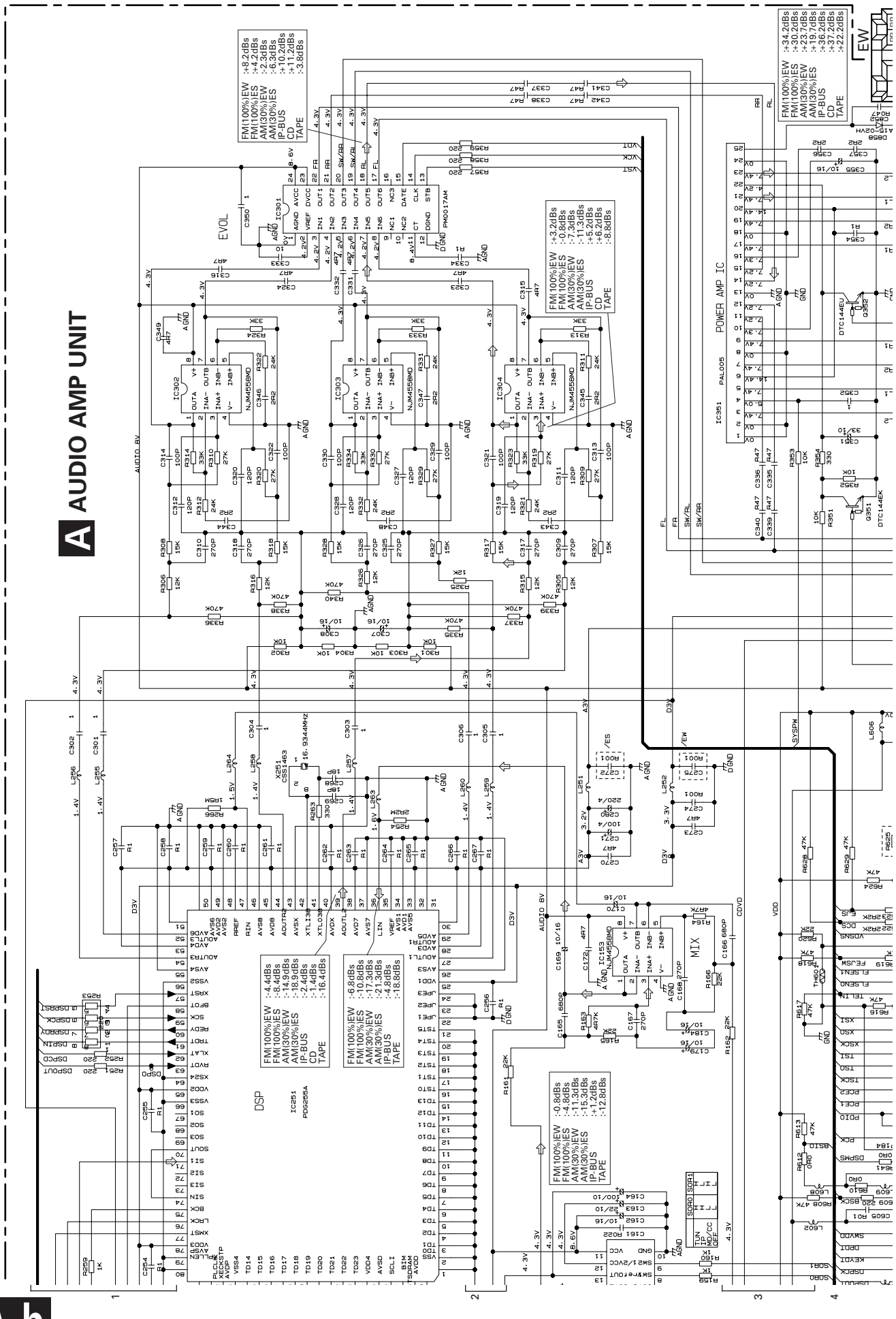
A-b

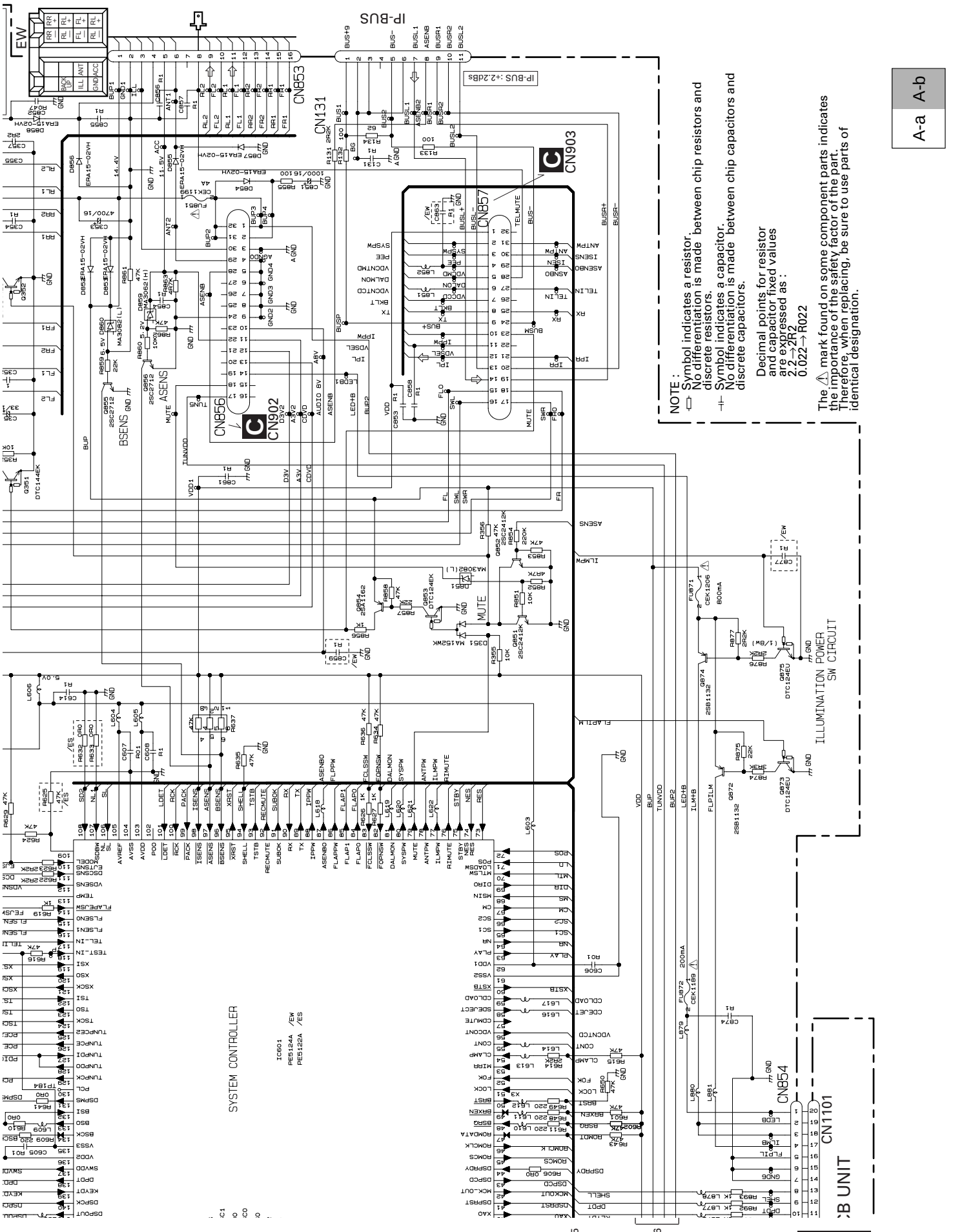

A AUDIO AMP UNIT
DSP
IC251
PDG255A
16.9344MHz
SYSTEM CONTROLLER
IC601
PE5124A /EW
PE5122A /ES
MIX
POWER AMP IC
IC351
PAL005
EVOL
PM0017AM
NJM4558MD
MUTE
BSENS
ASENS
CN856
CN902
CN853
CN131
CN857
CN903
IP-BUS
CN854
CN1101
F PANEL PCB UNIT
ILLUMINATION POWER
SW CIRCUIT
EW
FM(100%)EW :-4.4dBs
FM(100%)ES :-8.4dBs
AM(30%)EW :-14.9dBs
AM(30%)ES :-18.9dBs
IP-BUS :-2.4dBs
CD :-1.4dBs
TAPE :-16.4dBs
FM(100%)EW :-6.8dBs
FM(100%)ES :-10.8dBs
AM(30%)EW :-17.3dBs
AM(30%)ES :-21.3dBs
IP-BUS :-4.8dBs
TAPE :-18.8dBs
FM(100%)EW :-0.8dBs
FM(100%)ES :-4.8dBs
AM(30%)EW :-11.3dBs
AM(30%)ES :-15.3dBs
IP-BUS :+1.2dBs
TAPE :-12.8dBs
FM(100%)EW :+8.2dBs
FM(100%)ES :+4.2dBs
AM(30%)EW :-2.3dBs
AM(30%)ES :-6.3dBs
IP-BUS :+10.2dBs
CD :+11.2dBs
TAPE :-3.8dBs
FM(100%)EW :+3.2dBs
FM(100%)ES :-0.8dBs
AM(30%)EW :-7.3dBs
AM(30%)ES :-11.3dBs
IP-BUS :+5.2dBs
CD :+6.2dBs
TAPE :-8.8dBs
FM(100%)EW :+34.2dBs
FM(100%)ES :+30.2dBs
AM(30%)EW :+23.7dBs
AM(30%)ES :+19.7dBs
IP-BUS :+36.2dBs
CD :+37.2dBs
TAPE :+22.2dBs
IP-BUS -2.2dBs
NOTE :
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.
Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.


A-a A-b
CONTROL UNIT
CN602
CN701
CN141
CN251
CN111
TAPE
TAPE :-9dBs
FM(100%)EW :-15.5dBs
FM(100%)ES :-19.5dBs
AM(30%)EW :-26dBs
AM(30%)ES :-30dBs
IP-BUS :+1.2dBs
TAPE :-12.8dBs
FM(100%)EW :-15.5dBs
FM(100%)ES :-19.5dBs
AM(30%)EW :-26dBs
AM(30%)ES :-30dBs
AUDIO 8V
MD/CC L
MD/CC R
TUN L
TUN R
VDD
CDVD
BUP2
TUNVDD
IC151 BA3131FS
IC252 TC74VHC125FT
Q407 DTA114EK
Q406 1M43A
Q405 2SC4112K
Y401
5.1V

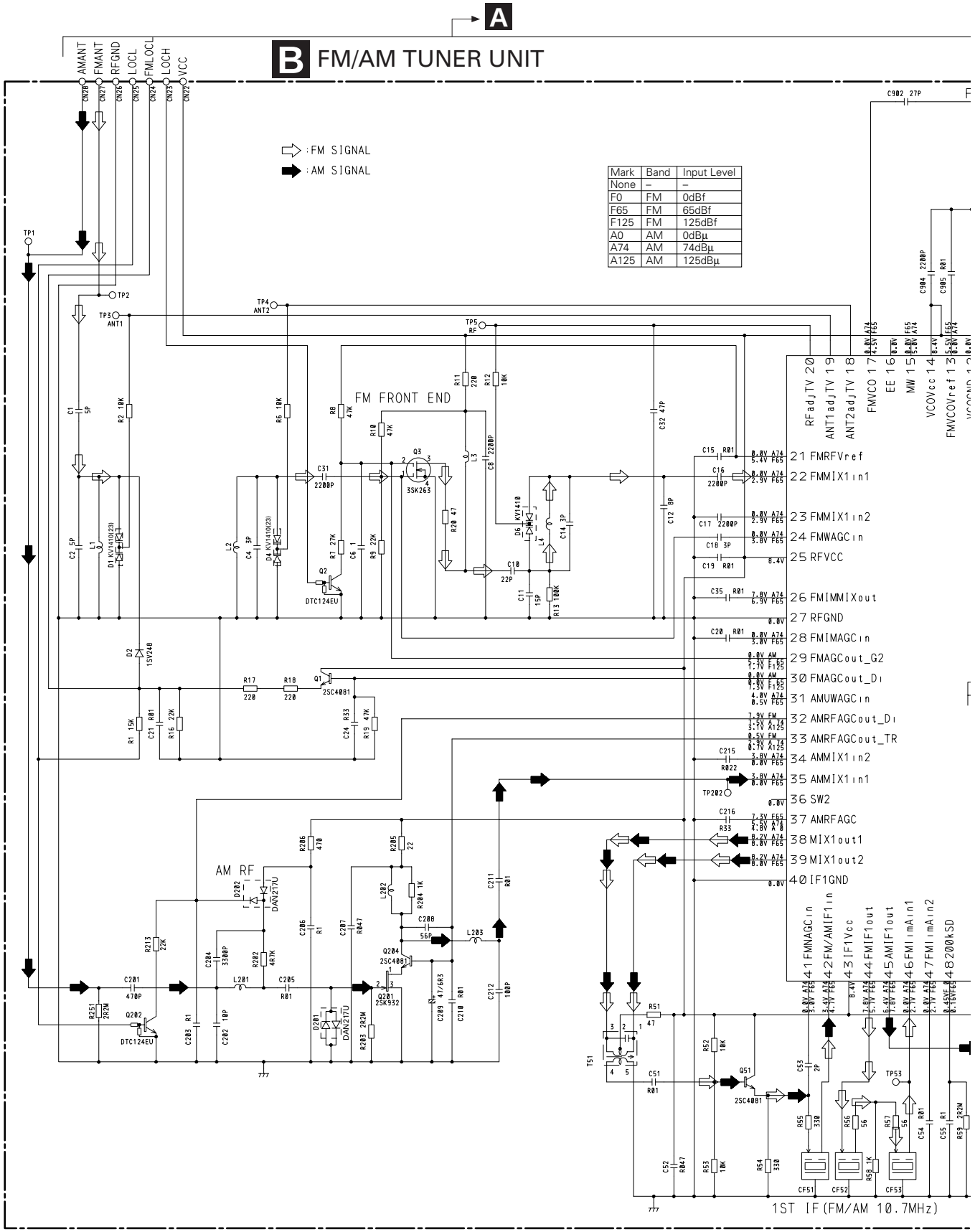

F PANEL PCB UN
A-a A-b
MOTOR UNIT
CN801
MOTOR CONTROL
RESET
SLIDE POSITION DETECTOR
RDS
FM/AM TUNER
B FM/AM TUNER UNIT
ANTENNA
CN451
CN401

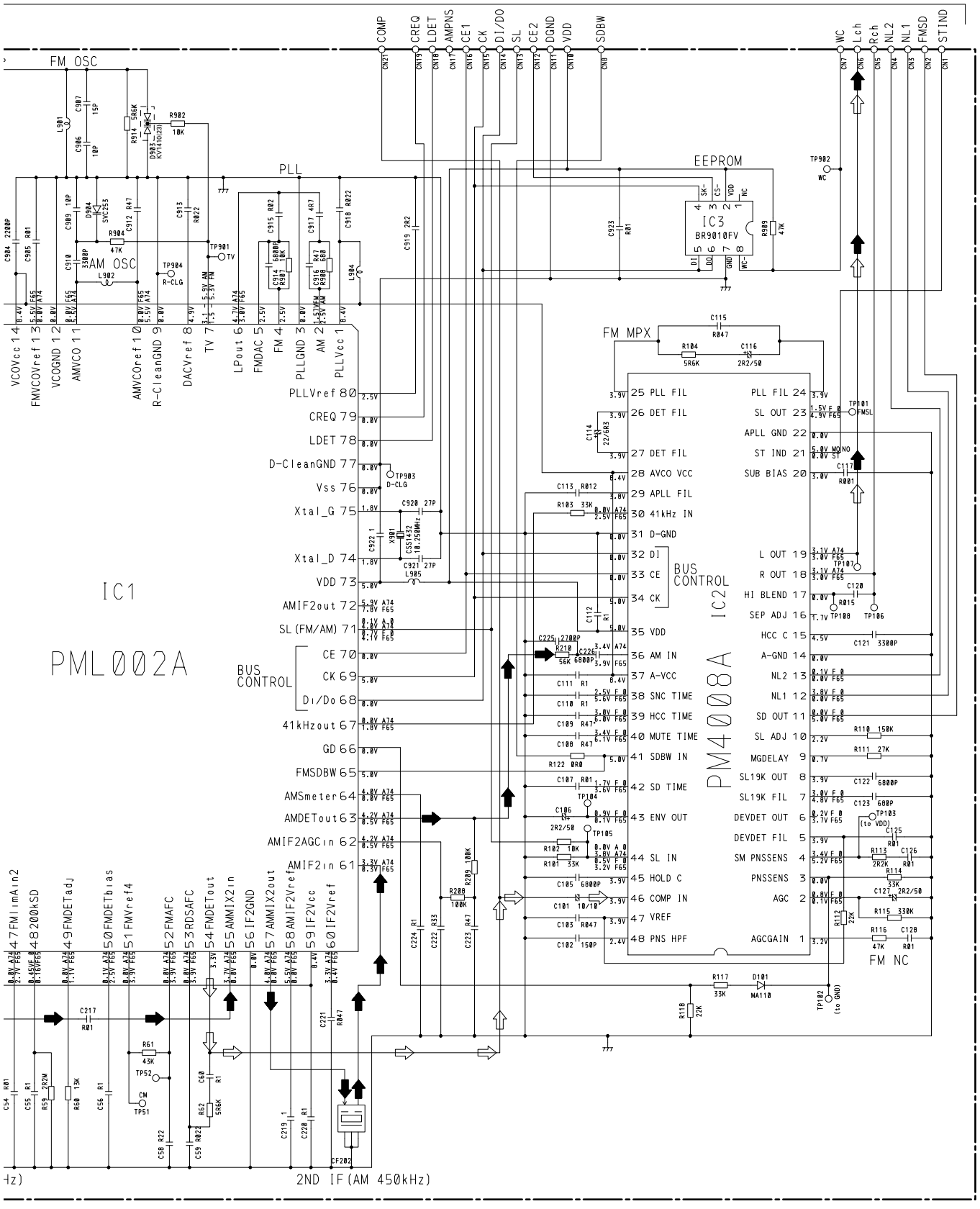
A-a A-b


A AUDIO AMP UNIT
EVOL
POWER AMP IC
PAL005
PMO017AM
NJM4558MD
DSP
IC251
PD6265A
MIX
FM(100%)EW :+8.2dBs
FM(100%)ES :+4.2dBs
AM(30%)EW :-2.3dBs
AM(30%)ES :-6.3dBs
IP-BUS :+10.2dBs
CD :+11.2dBs
TAPE :-3.8dBs
FM(100%)EW :+34.2dBs
FM(100%)ES :+30.2dBs
AM(30%)EW :+23.7dBs
AM(30%)ES :+19.7dBs
IP-BUS :+30.2dBs
CD :+31.2dBs
TAPE :+22.2dBs
FM(100%)EW :+3.2dBs
FM(100%)ES :-0.8dBs
AM(30%)EW :-7.3dBs
AM(30%)ES :-11.3dBs
IP-BUS :+5.2dBs
CD :+6.2dBs
TAPE :-8.8dBs
FM(100%)EW :-4.4dBs
FM(100%)ES :-8.4dBs
AM(30%)EW :-14.9dBs
AM(30%)ES :-18.9dBs
IP-BUS :-2.4dBs
CD :-1.4dBs
TAPE :-16.4dBs
FM(100%)EW :-6.8dBs
FM(100%)ES :-10.8dBs
AM(30%)EW :-17.3dBs
AM(30%)ES :-21.3dBs
IP-BUS :-4.8dBs
CD :-18.8dBs
TAPE
FM(100%)EW :-0.8dBs
FM(100%)ES :-4.8dBs
AM(30%)EW :-11.3dBs
AM(30%)ES :-15.3dBs
IP-BUS :+12.2dBs
TAPE :-12.8dBs

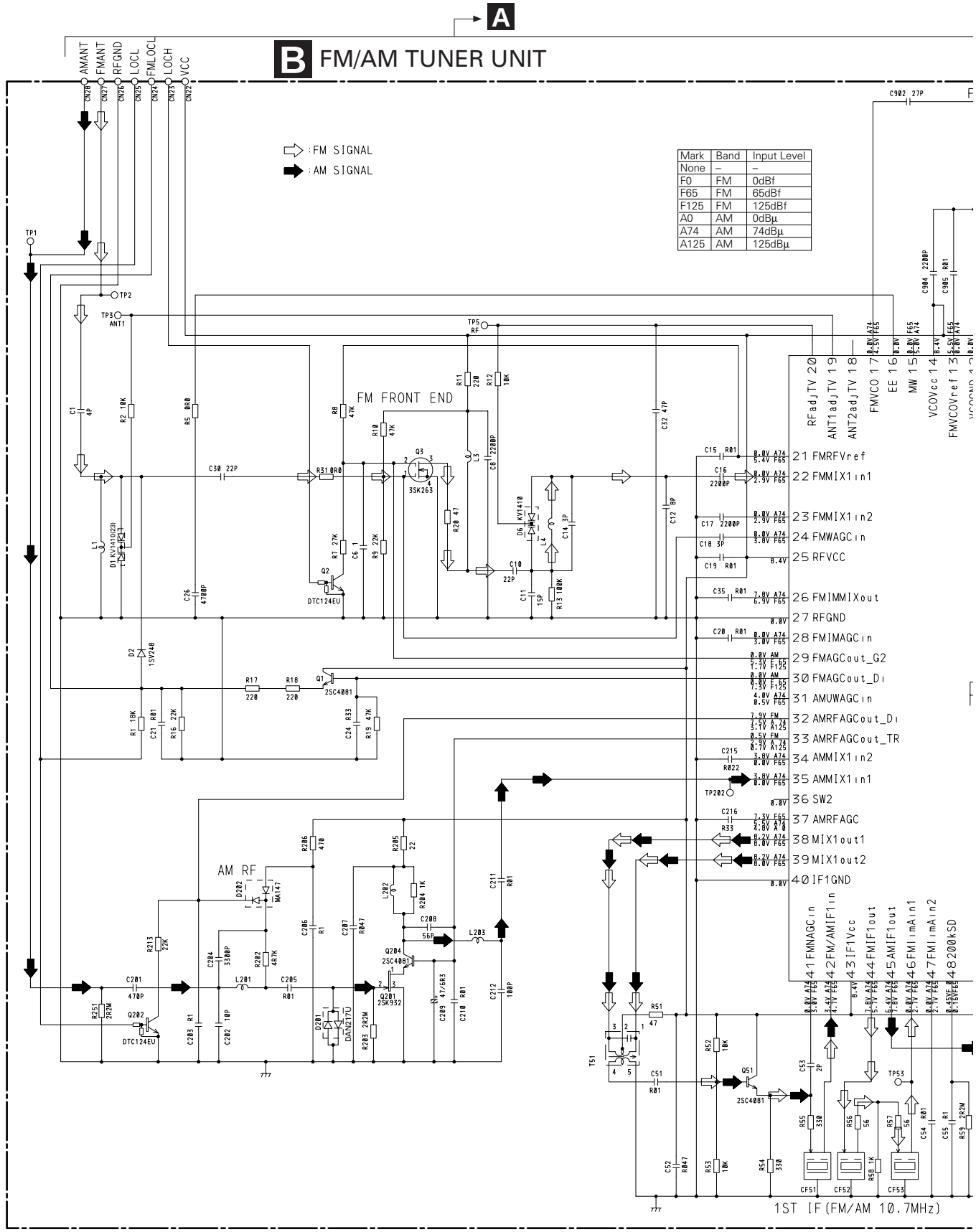

NOTE :
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.
Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
IP-BUS
IP-BUS :+2.2dBs
CN853
CN131
CN903
CN857
CN856
CN902
CN554
CN1101
SYSTEM CONTROLLER
IC601
PE5124A /EW
PE5122A /ES
ILLUMINATION POWER SW CIRCUIT
MUTE
ASENS
BSENS
A-a
A-b

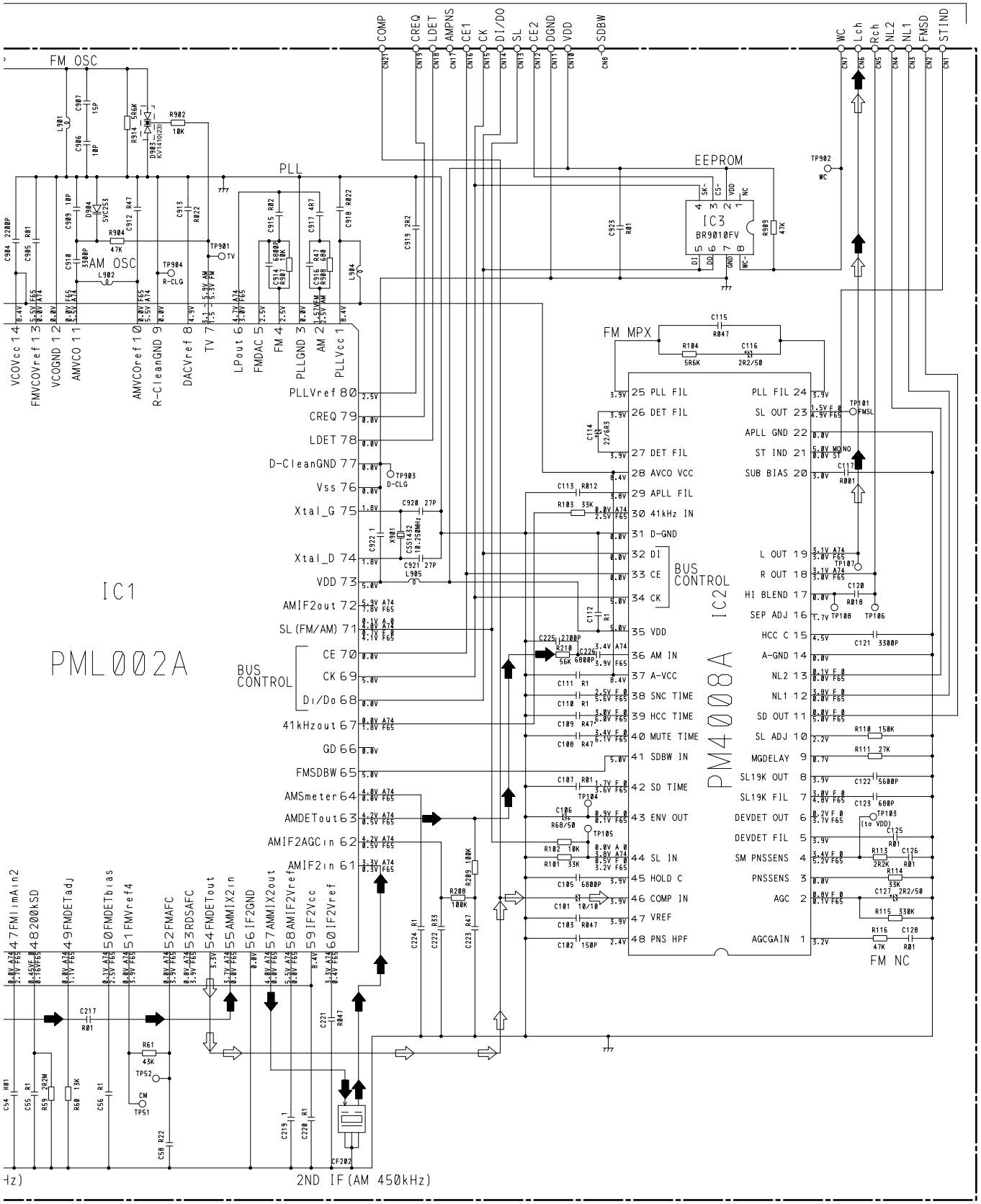
3.3 FM/AM TUNER UNIT(FH-P6600R/EW)



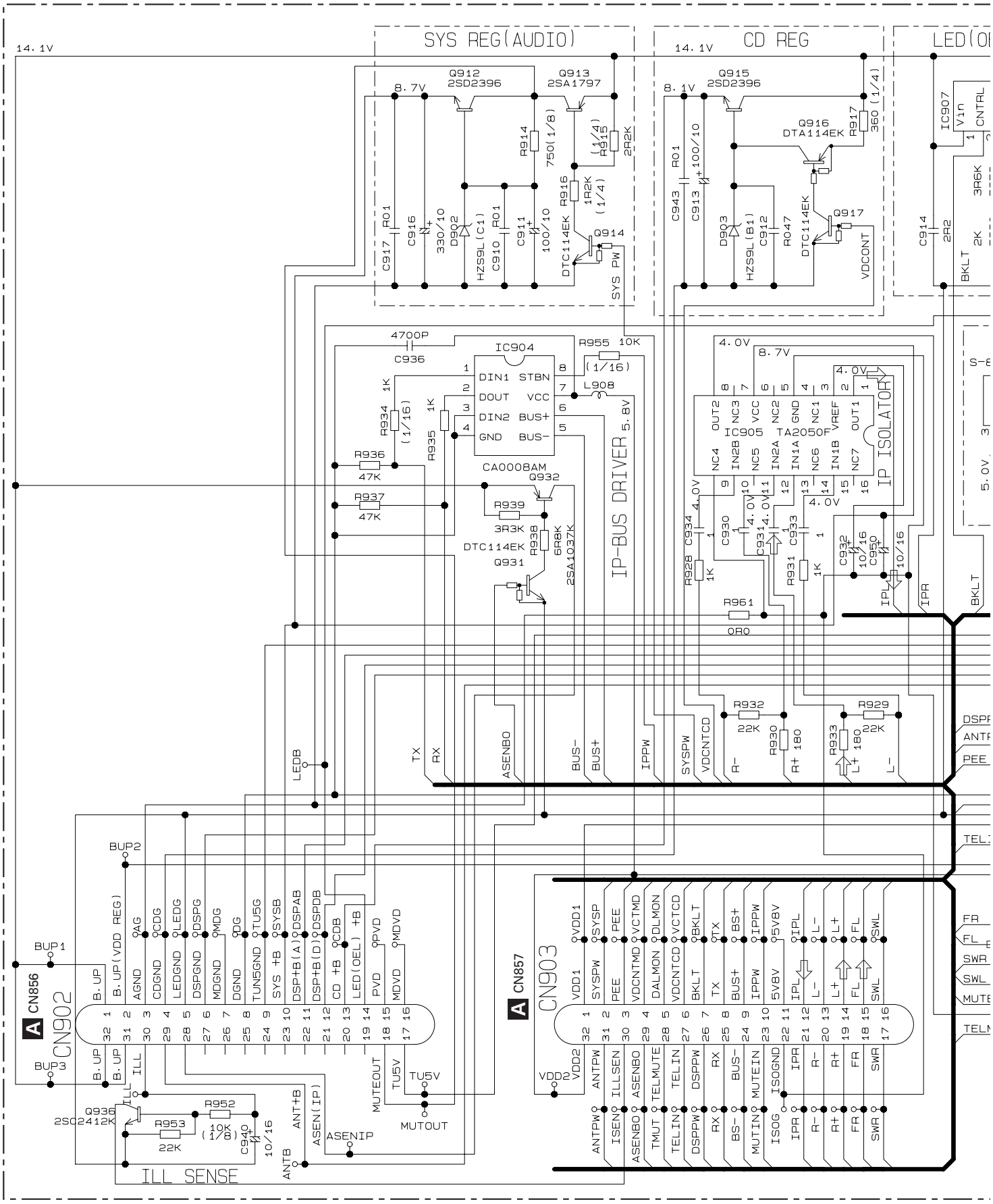

IC1
PML002A
PM4008A IC2
IC3
BR9010FV
EEPROM
FM OSC
AM OSC
PLL
FM MPX
BUS CONTROL
FM NC
2ND IF(AM 450kHz)

3.4 FM/AM TUNER UNIT(FH-P6600/ES)

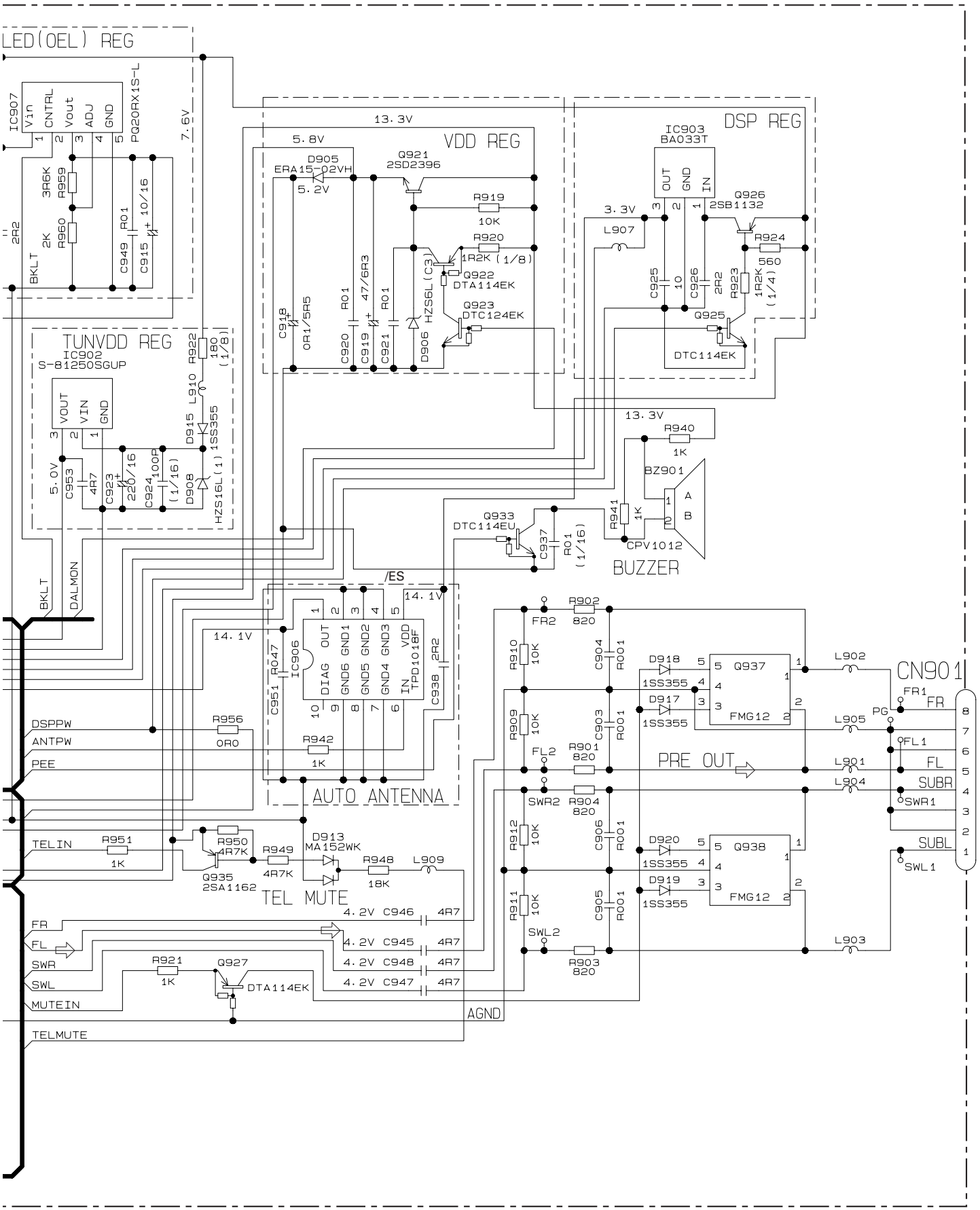



IC1
PML002A
IC2
PM4008A
FM OSC
AM OSC
PLL
EEPROM
IC3
BR9010FV
FM MPX
FM NC
BUS CONTROL
2ND IF(AM 450kHz)
COMP
CREQ
LDET
AMPNS
CE1
CK
DI/DO
SL
CE2
DGND
VDD
SDBW
WC
Lch
Rch
NL2
NL1
FMSD
STIND

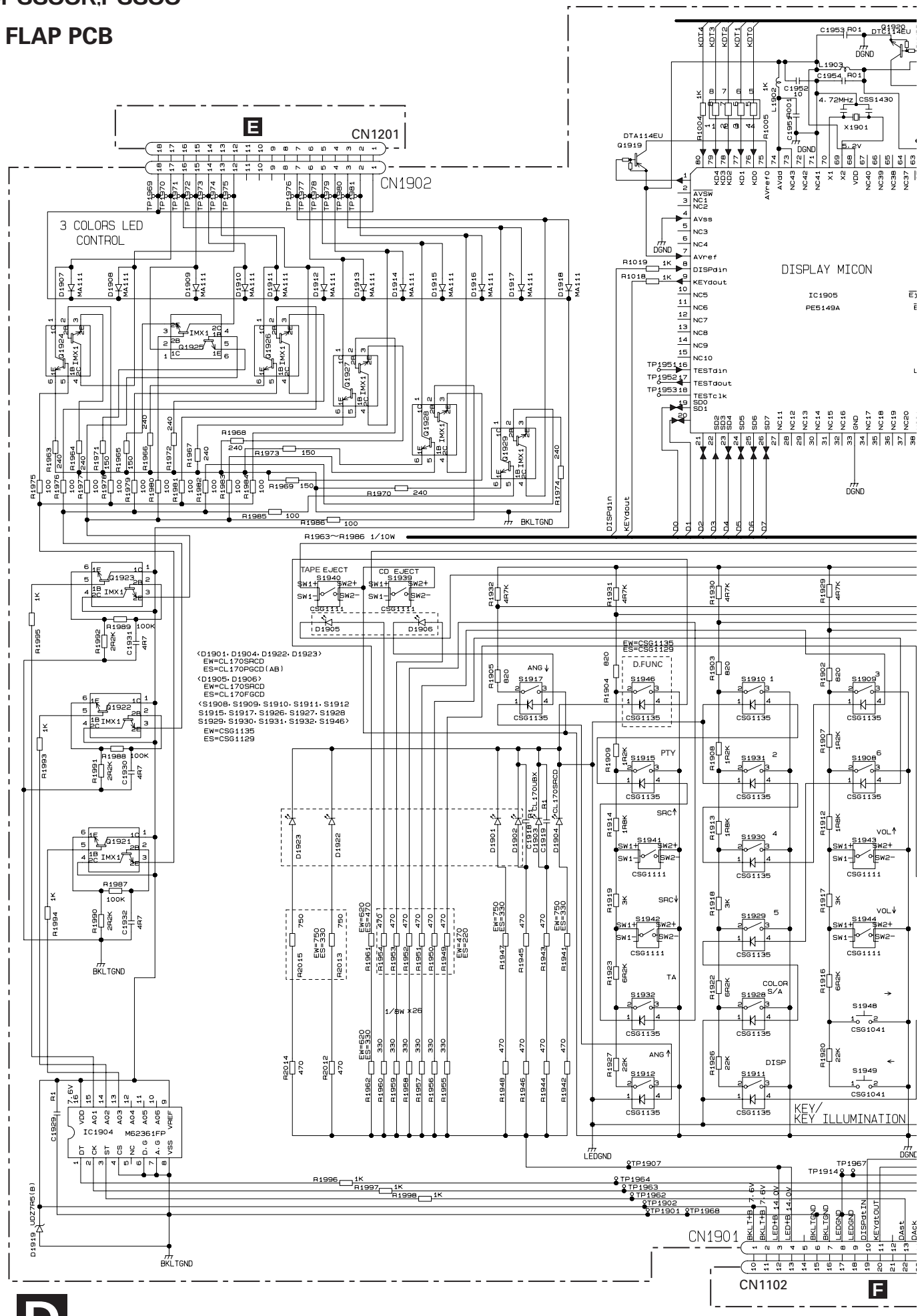
3.5 POWER SUPPLY UNIT



C POWER SUPPLY UNIT

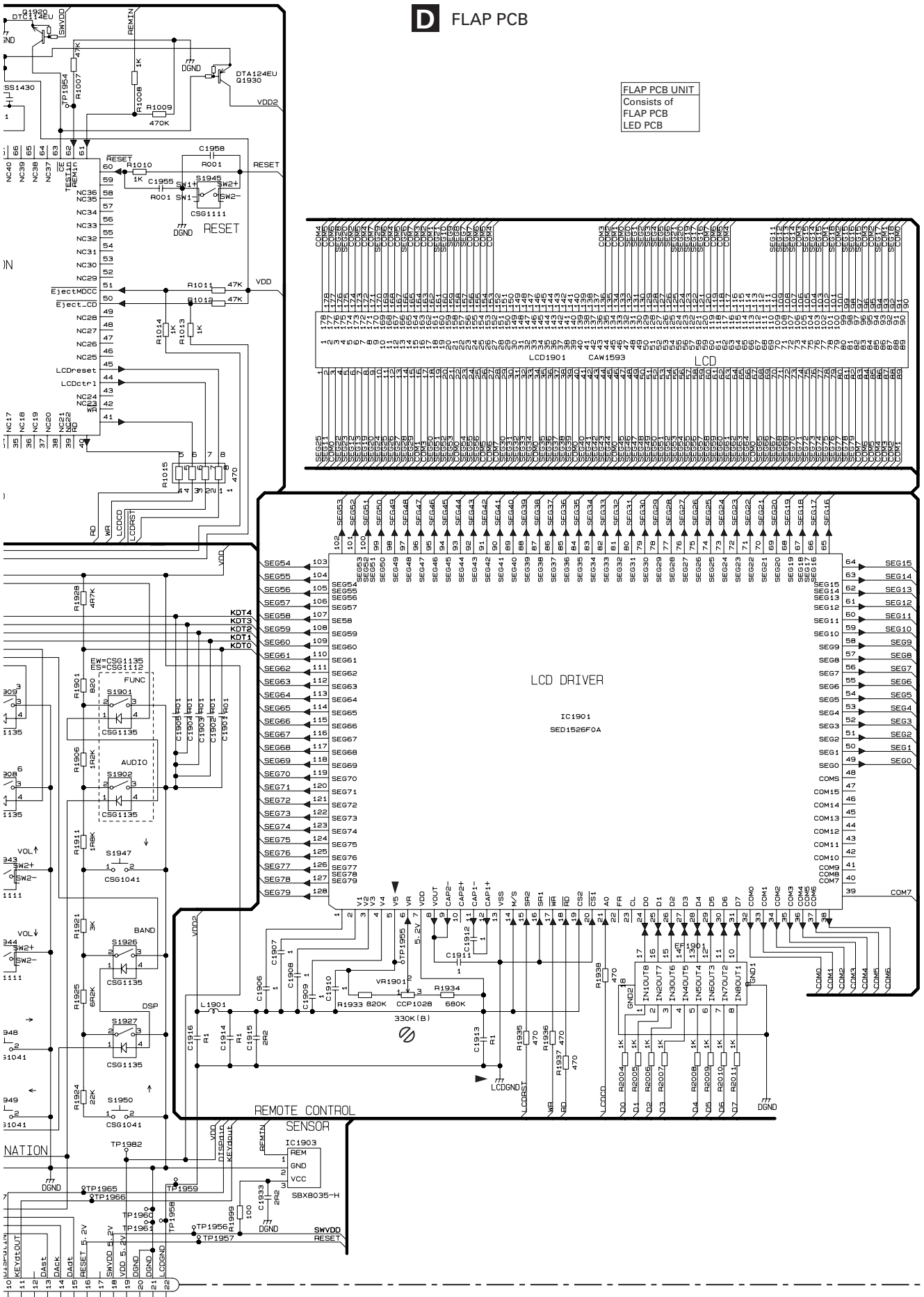


3.6 FLAP PCB

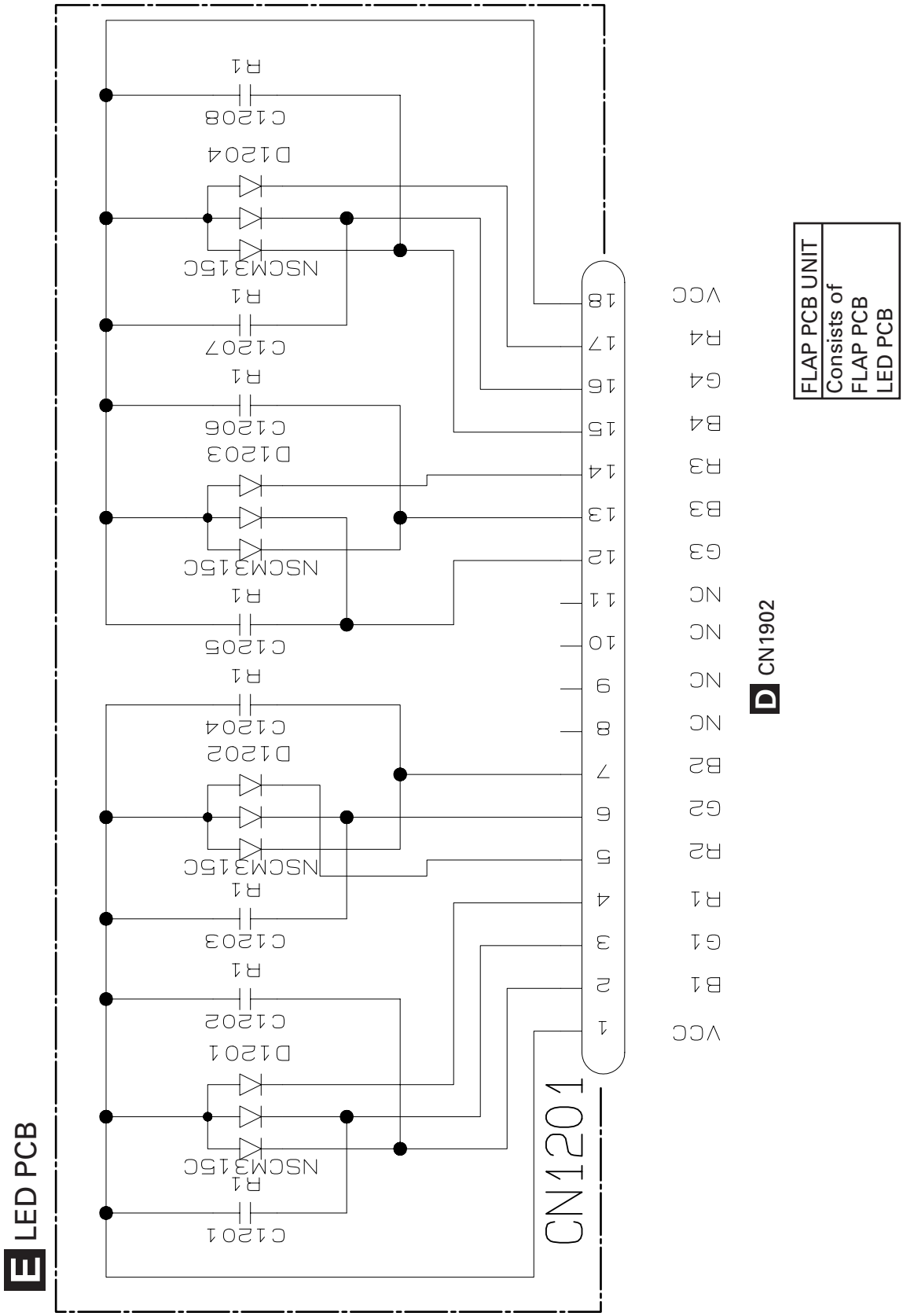

CN1201
CN1902
3 COLORS LED CONTROL
DISPLAY MICON
IC1905
PE5149A
TAPE EJECT
CD EJECT
D.FUNC
PTY
SRC
VOL
TA
COLOR S/A
DISP
ANG
KEY/ KEY ILLUMINATION
IC1904 M62361FP
CN1901
CN1102
BKLTGND
LEDGND
DGND

D FLAP PCB

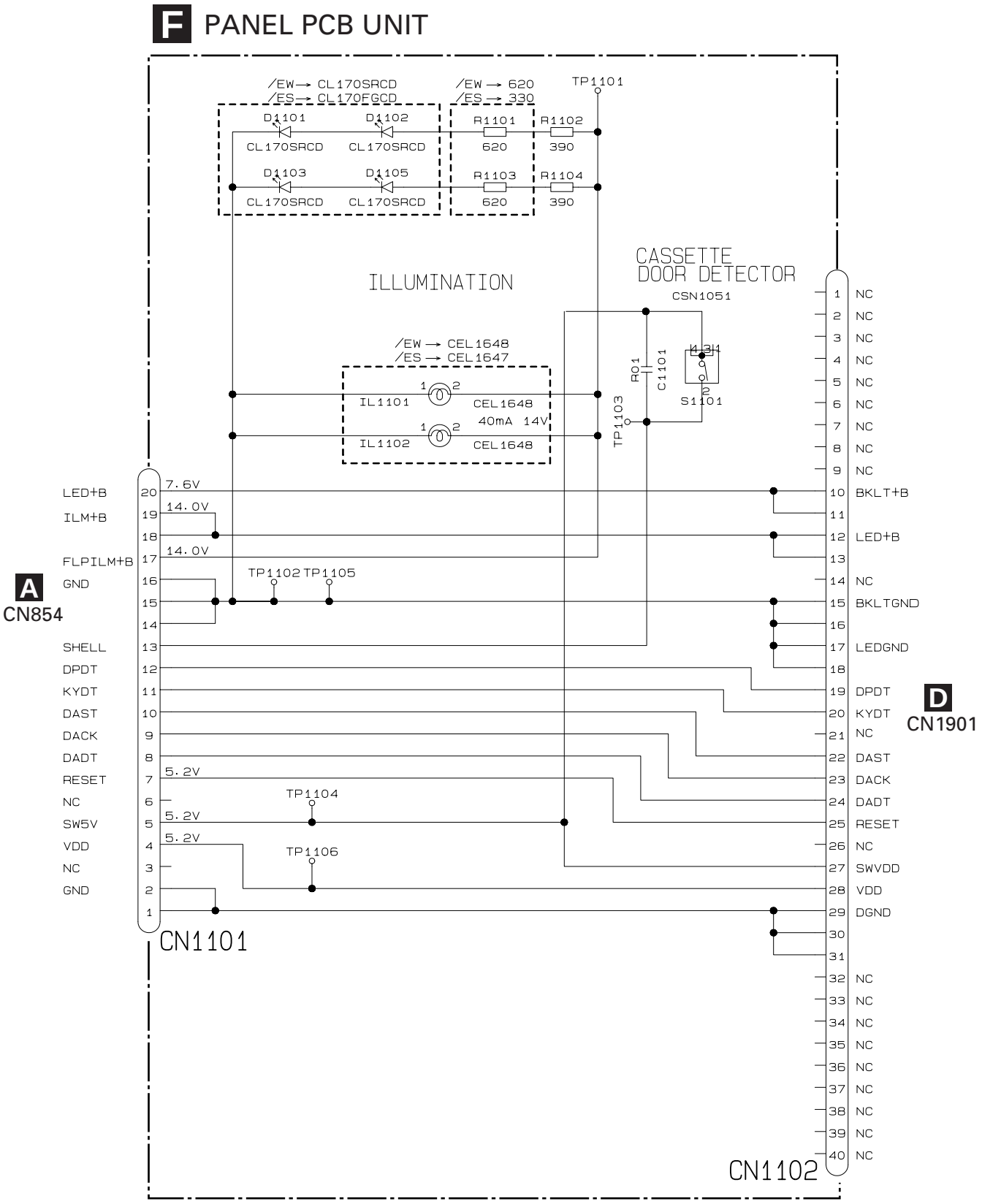
FLAP PCB UNIT
Consists of
FLAP PCB
LED PCB



3.7 LED PCB

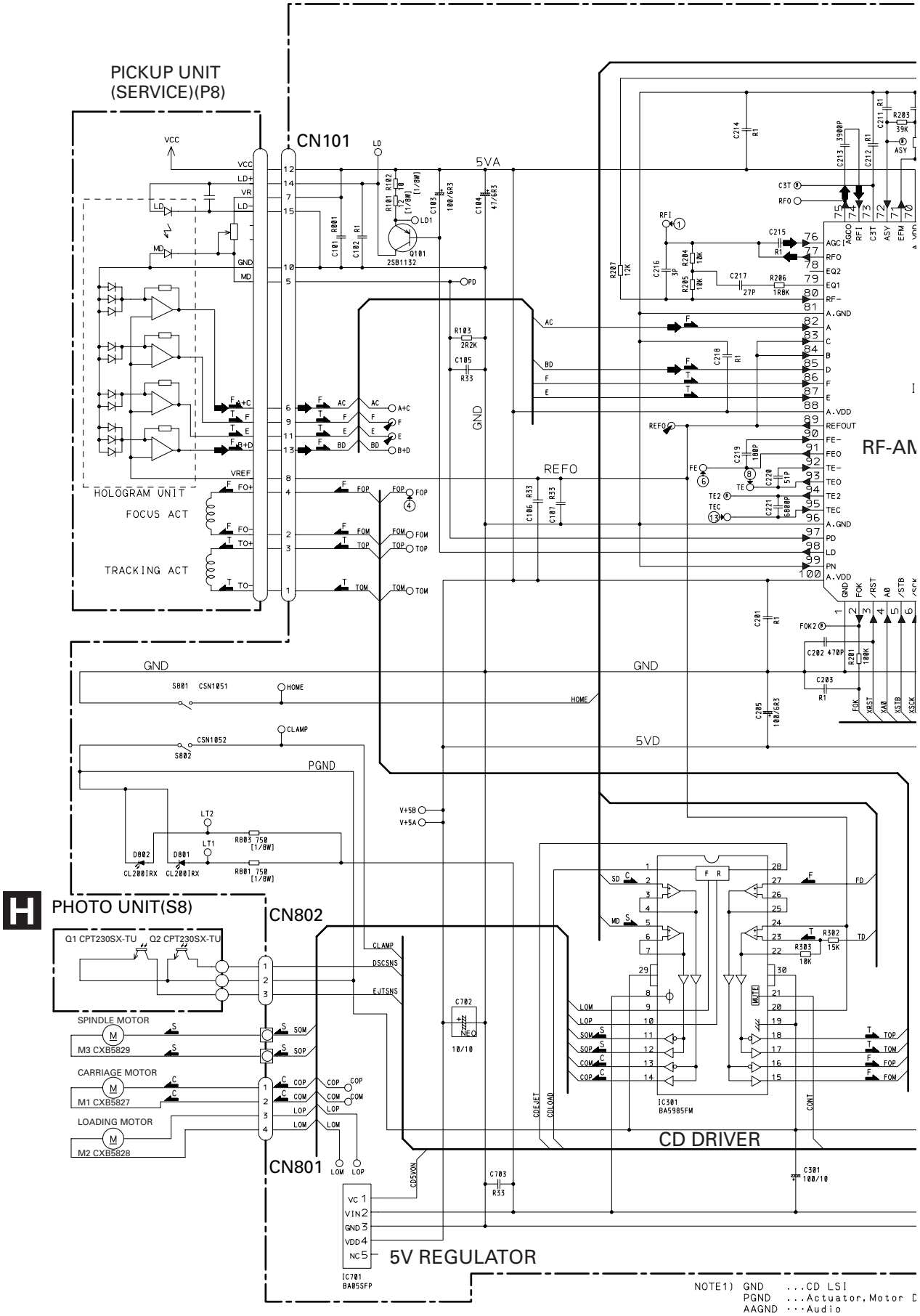

E LED PCB
CN1201
1 VCC
2 B1
3 G1
4 R1
5 R2
6 G2
7 B2
8 NC
9 NC
10 NC
11 NC
12 G3
13 B3
14 R3
15 B4
16 G4
17 R4
18 VCC
D CN1902
FLAP PCB UNIT
Consists of
FLAP PCB
LED PCB
C1201
R1
NSCM3150
D1201
C1202
R1
C1203
R1
NSCM3150
D1202
C1204
R1
C1205
R1
NSCM3150
D1203
C1206
R1
C1207
R1
NSCM3150
D1204
C1208
R1

3.8 PANEL PCB UNIT



3.9 CD MECHANISM MODULE

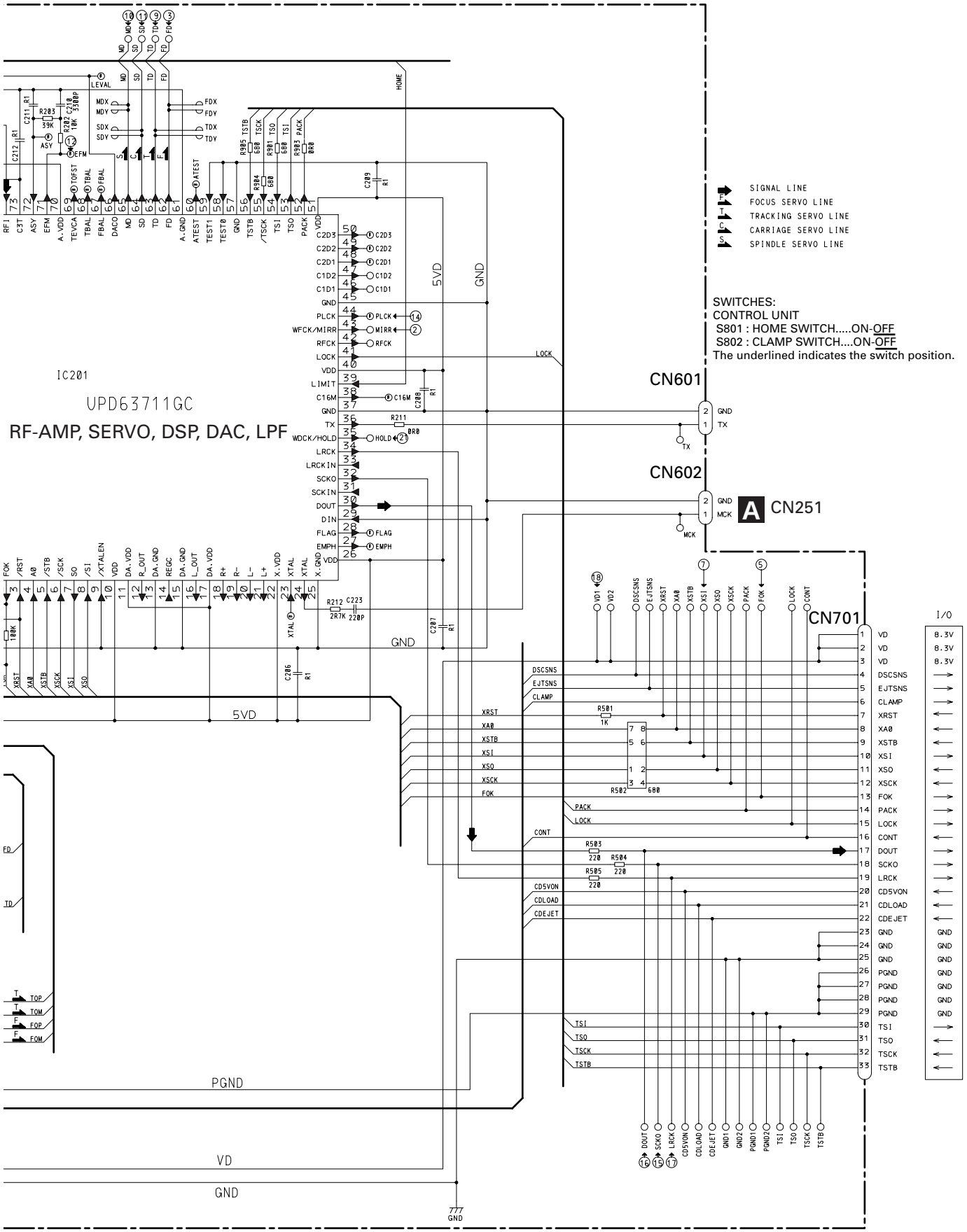
G CONTROL UNIT(S8TX)



NOTE1) GND ...CD LSI
PGND ...Actuator,Motor D
AAGND ···Audio

These GND's are not conn
PGND isconnected to a fl

NOTE2) This schematic applies to



r, Motor Driver

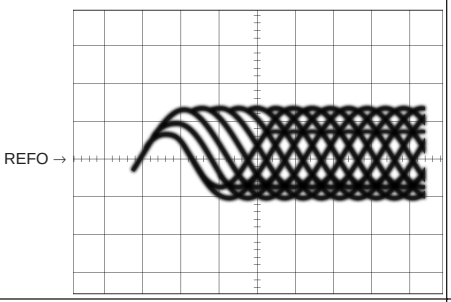
not connected to each other on PCB.
d to a floating mechanism part by a screw.

pplies to CNP.

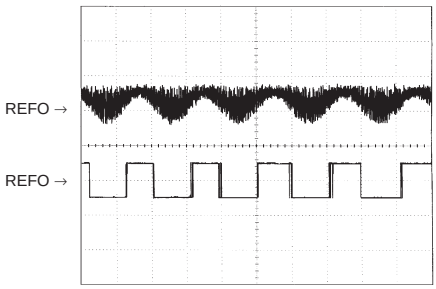
Note:1. The encircled numbers denote measuring pointes in the circuit diagram.
2. Reference voltage
REFO:2.5V

● Waveforms

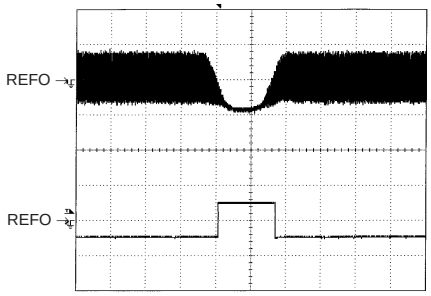
① RFI 0.5V/div. 0.5µs/div.
Normal mode: play



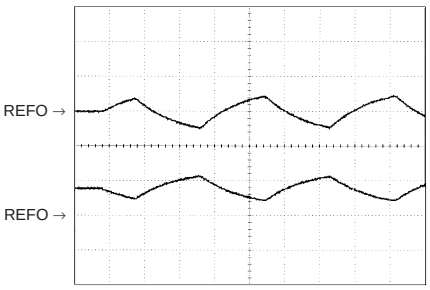
① CH1: RFI 1V/div. 0.5ms/div.
② CH2: MIRR 5V/div.
Test mode: Tracking open



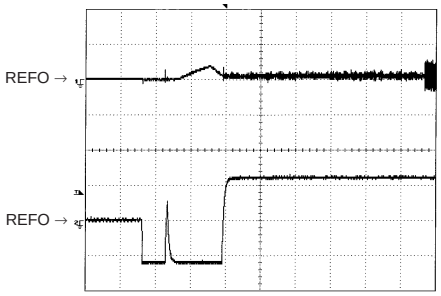
① CH1: RFI 1V/div. 0.5ms/div.
② CH2: MIRR 5V/div.
Normal mode: The defect part passes 800µm



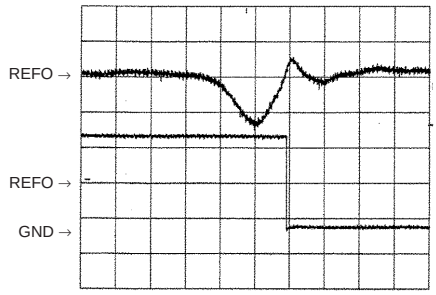
③ CH1: FD 0.5V/div. 0.2s/div.
④ CH2: FO+ 2V/div.
Test mode: No disc, Focus close



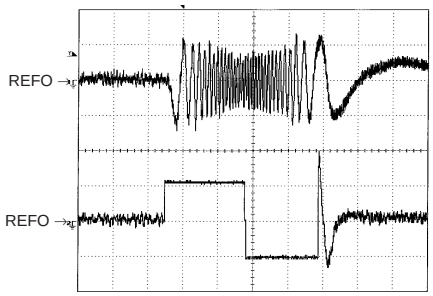
③ CH1: FD 0.5V/div. 0.2s/div.
⑤ CH2: FOK 2V/div.
Normal mode: Focus close



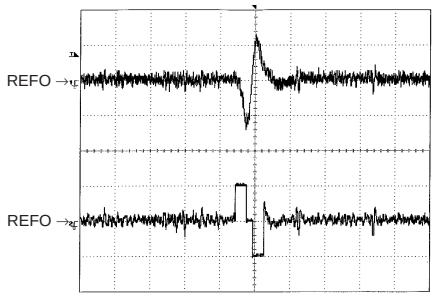
⑥ CH1: FE 0.5V/div. 1ms/div.
⑦ CH2: XSI 2V/div.
Normal mode: Focus close



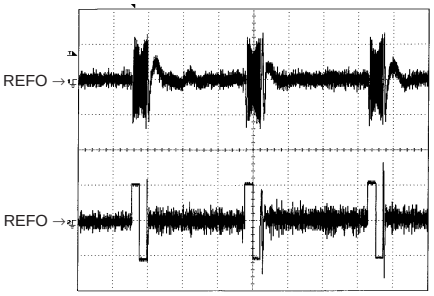
⑧ CH1: TE 0.5V/div. 0.5ms/div.
⑨ CH2: TD 0.5V/div.
Test mode: 32 tracks jump (FWD)



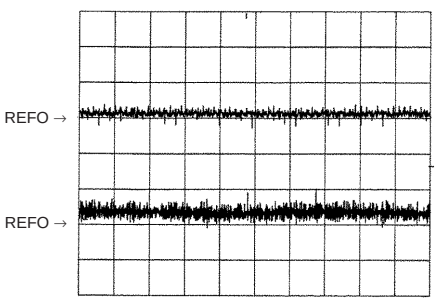
⑧ CH1: TE 0.5V/div. 0.5ms/div.
⑨ CH2: TD 0.5V/div.
Test mode: Single jump (FWD)



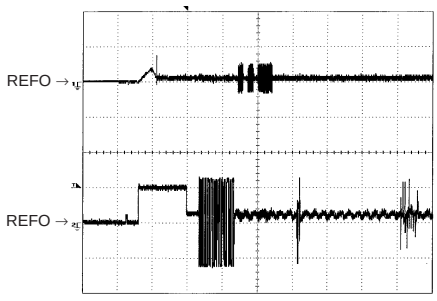
⑧ CH1: TE 0.5V/div. 5ms/div.
⑨ CH2: TD 0.5V/div.
Test mode: 100 tracks jump (FWD)



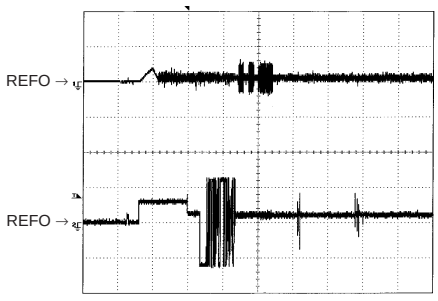
⑥ CH1: FE 0.1V/div. 20ms/div.
③ CH2: FD 0.2V/div.
Normal mode: Play



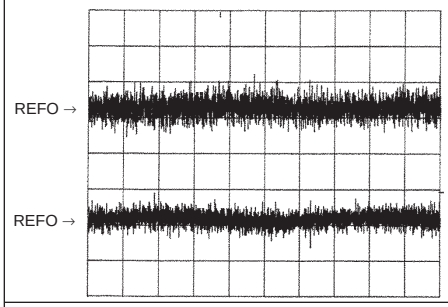
③ CH1: FD 0.5V/div. 0.5s/div.
⑩ CH2: MD 1V/div.
Normal mode: Focus close (12cm)



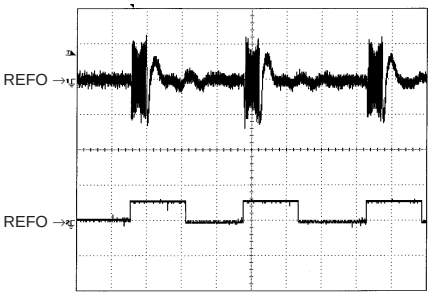
③ CH1: FD 0.5V/div. 0.5s/div.
⑩ CH2: MD 1V/div.
Normal mode: Focus close (8cm)



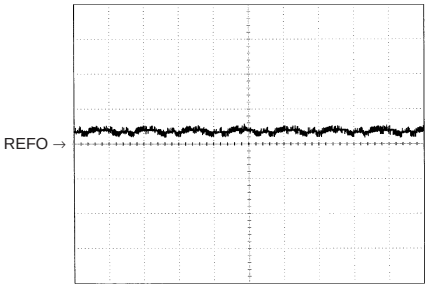
⑧ CH1: TE 0.2V/div. 20ms/div.
⑨ CH2: TD 0.2V/div.
Normal mode: play



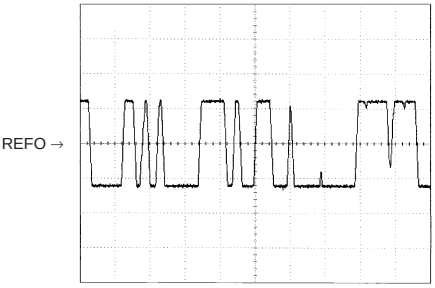
⑧ CH1: TE 0.5V/div. 5ms/div.
⑪ CH2: SD 0.5V/div.
TEST mode: 100 Tracks jump(FWD)



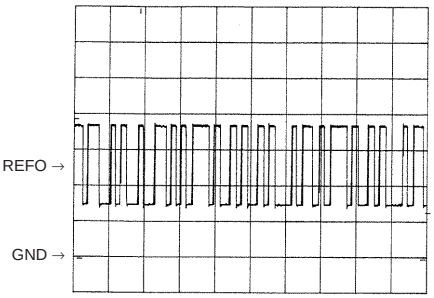
⑩ MD 0.5V/div. 0.1s/div.
Normal mode: Play (12cm)



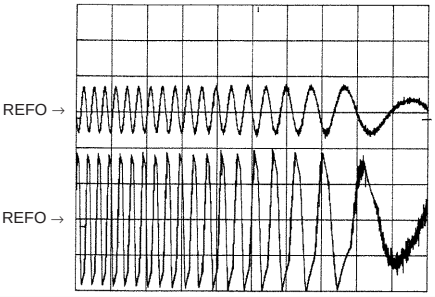
⑩ MD 1V/div. 10ms/div.
Normal mode:
Long Search (12cm)



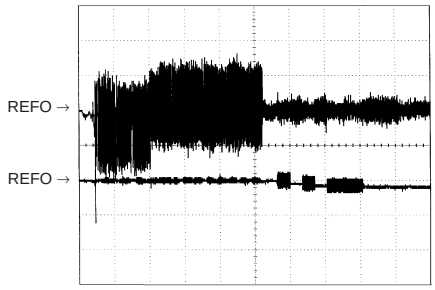
⑫ EFM 1V/div. 5µs/div.
Normal mode: play



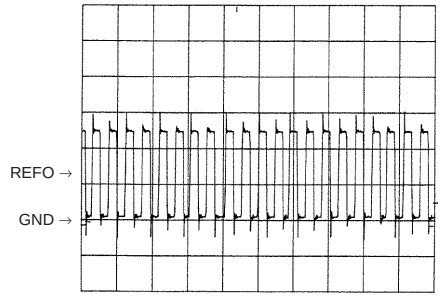
⑧ CH1: TE 1V/div. 2ms/div.
⑬ CH2: TEC 1V/div.
Test mode: Focus close
Tracking open



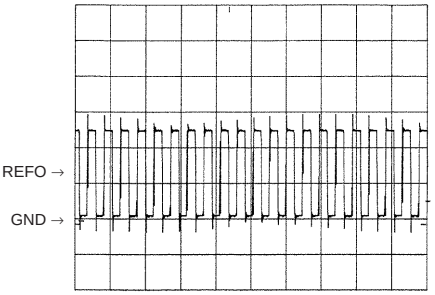
⑧ CH1: TE 0.5V/div. 0.2s/div.
⑥ CH2: FE 0.5V/div.
Normal mode: AGC after focus close



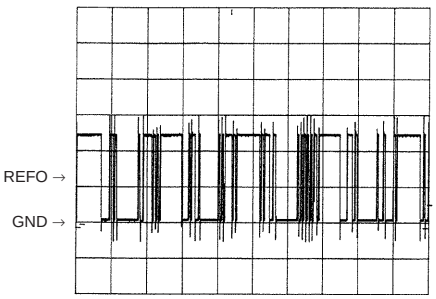
⑭ PLCK 2V/div. 0.5µs/div.
Normal mode: play



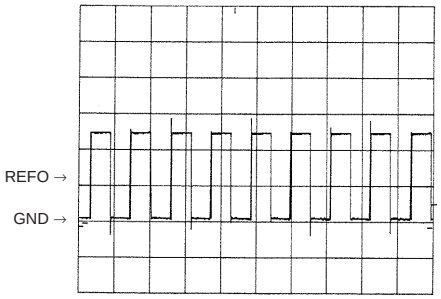
⑮ SCKO 2V/div. 1µs/div.
Normal mode: play



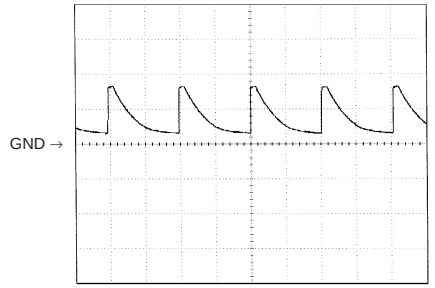
⑯ Dout 2V/div. 10µs/div.
Normal mode: play



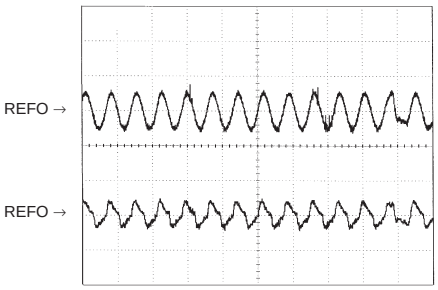
⑰ LRCK 2V/div. 20µs/div.
Normal mode: play



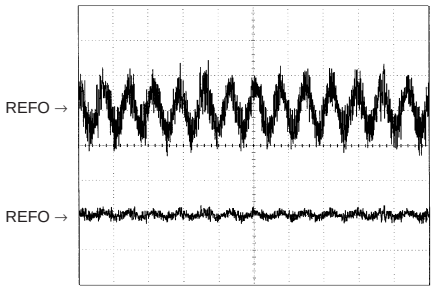
⑱ VD 5V/div. 50ms/div.
Normal mode: No disc



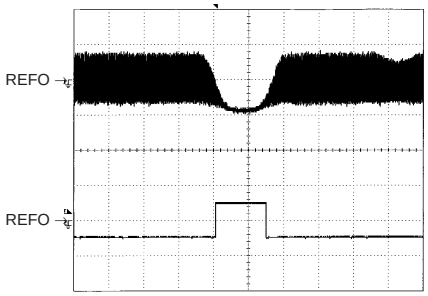
⑥ CH1: FE 0.2V/div.
③ CH2: FD 0.5V/div.
1ms/div.
Normal mode: During AGC



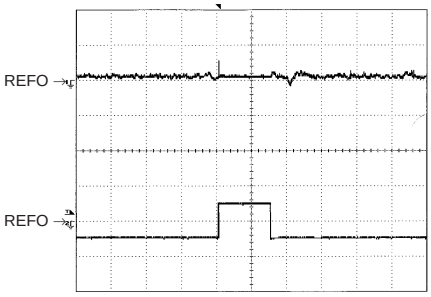
⑧ CH1: TE 0.2V/div.
⑨ CH2: TD 0.5V/div.
1ms/div.
Normal mode: During AGC



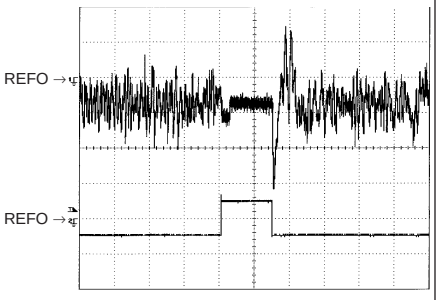
① CH1: RFI 1V/div.
㉑ CH2: HOLD 5V/div.
0.5ms/div.
Normal mode: The defect part passes 800µm(B.D)



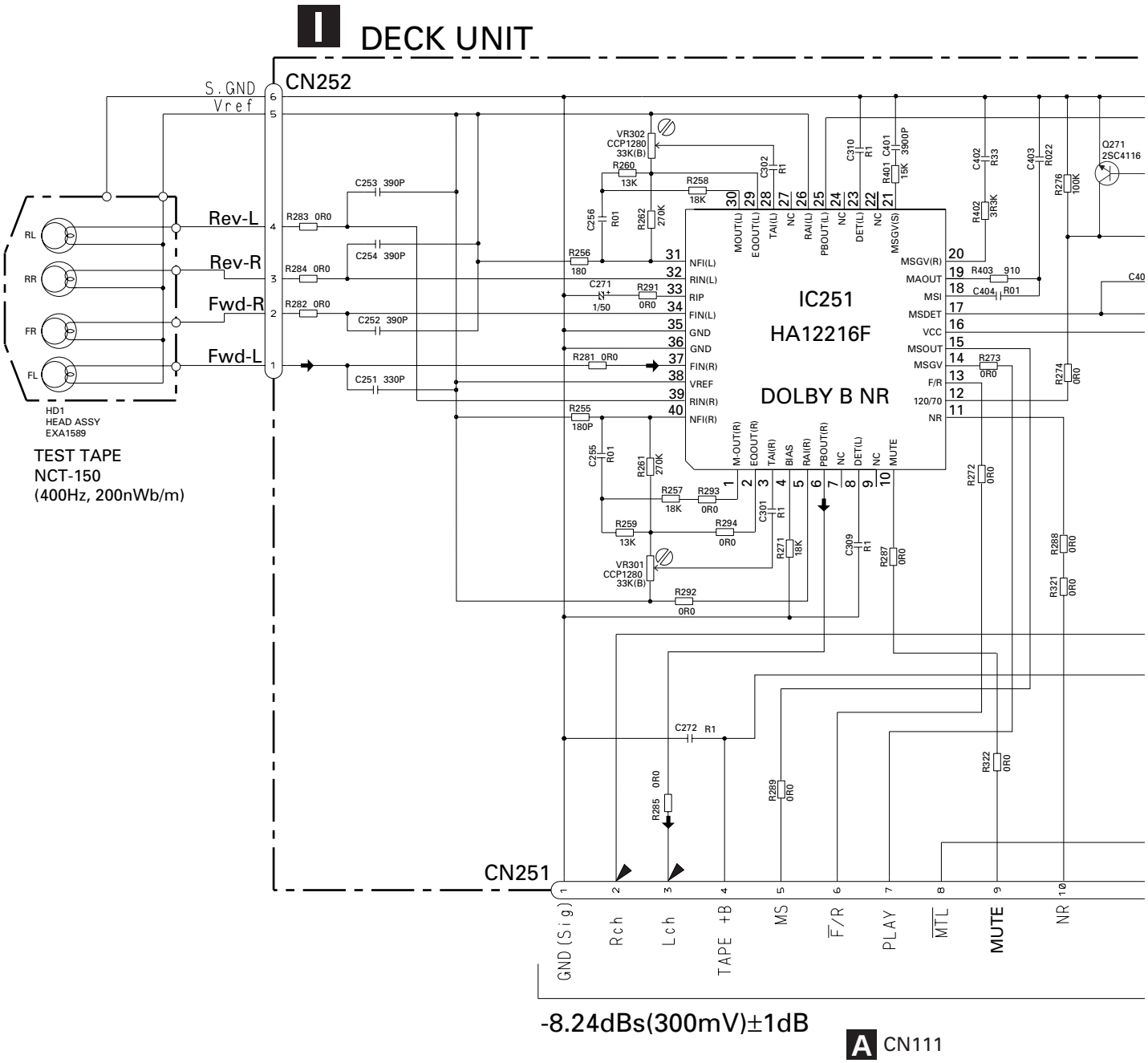
③ CH1: FD 0.5V/div.
㉑ CH2: HOLD 5V/div.
0.5ms/div.
Normal mode: The defect part passes 800µm(B.D)

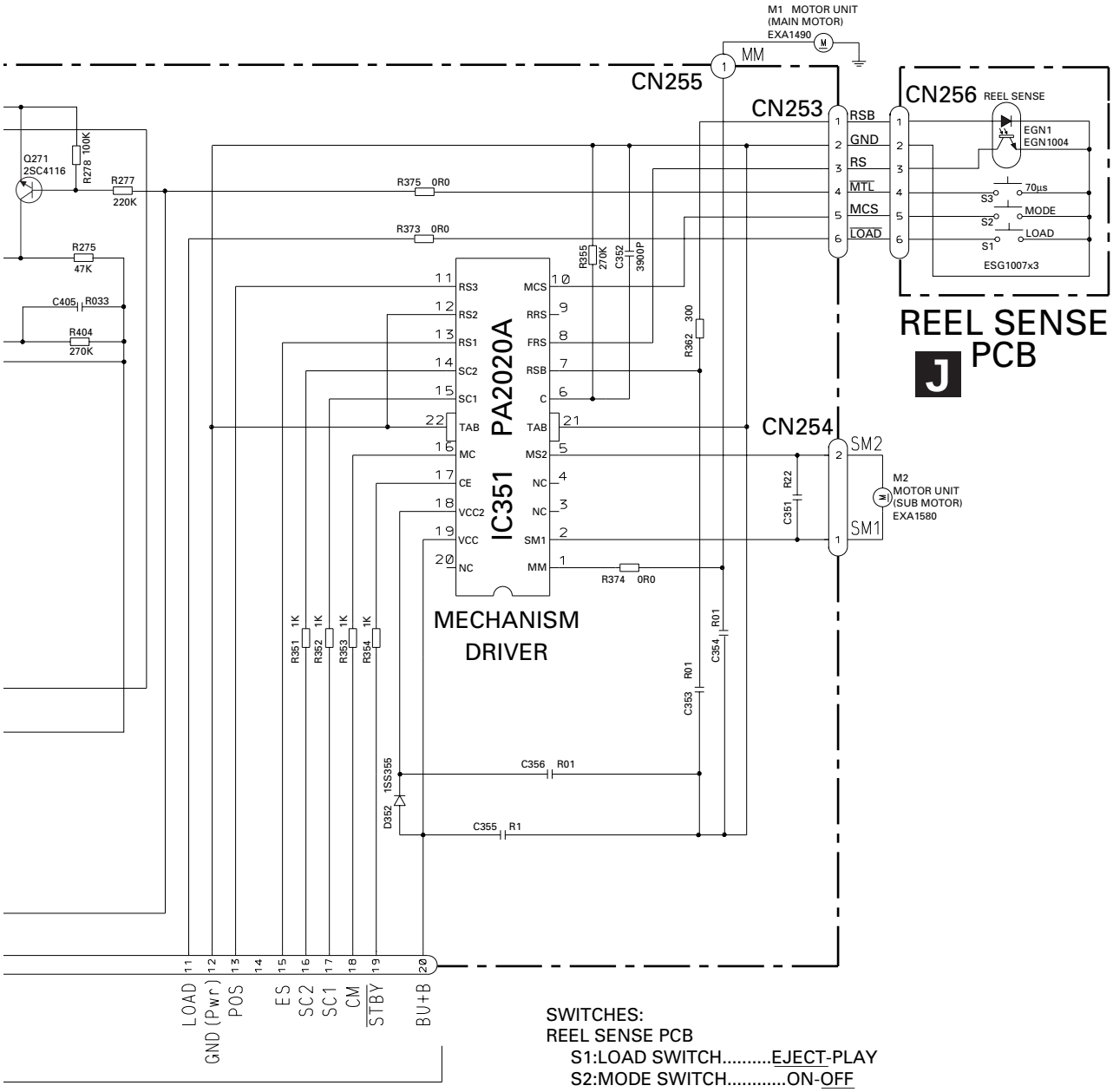


⑨ CH1: TD 0.1V/div.
㉑ CH2: HOLD 5V/div.
0.5ms/div.
Normal mode: The defect part passes 800µm(B.D)



3.10 CASSETTE MECHANISM MODULE





SWITCHES:
REEL SENSE PCB
S1:LOAD SWITCH.....EJECT-PLAY
S2:MODE SWITCH.....ON-OFF
S3:70µs SWITCH.....ON-OFF
The underlined indicates the switch position.

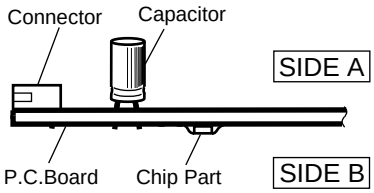
4. PCB CONNECTION DIAGRAM

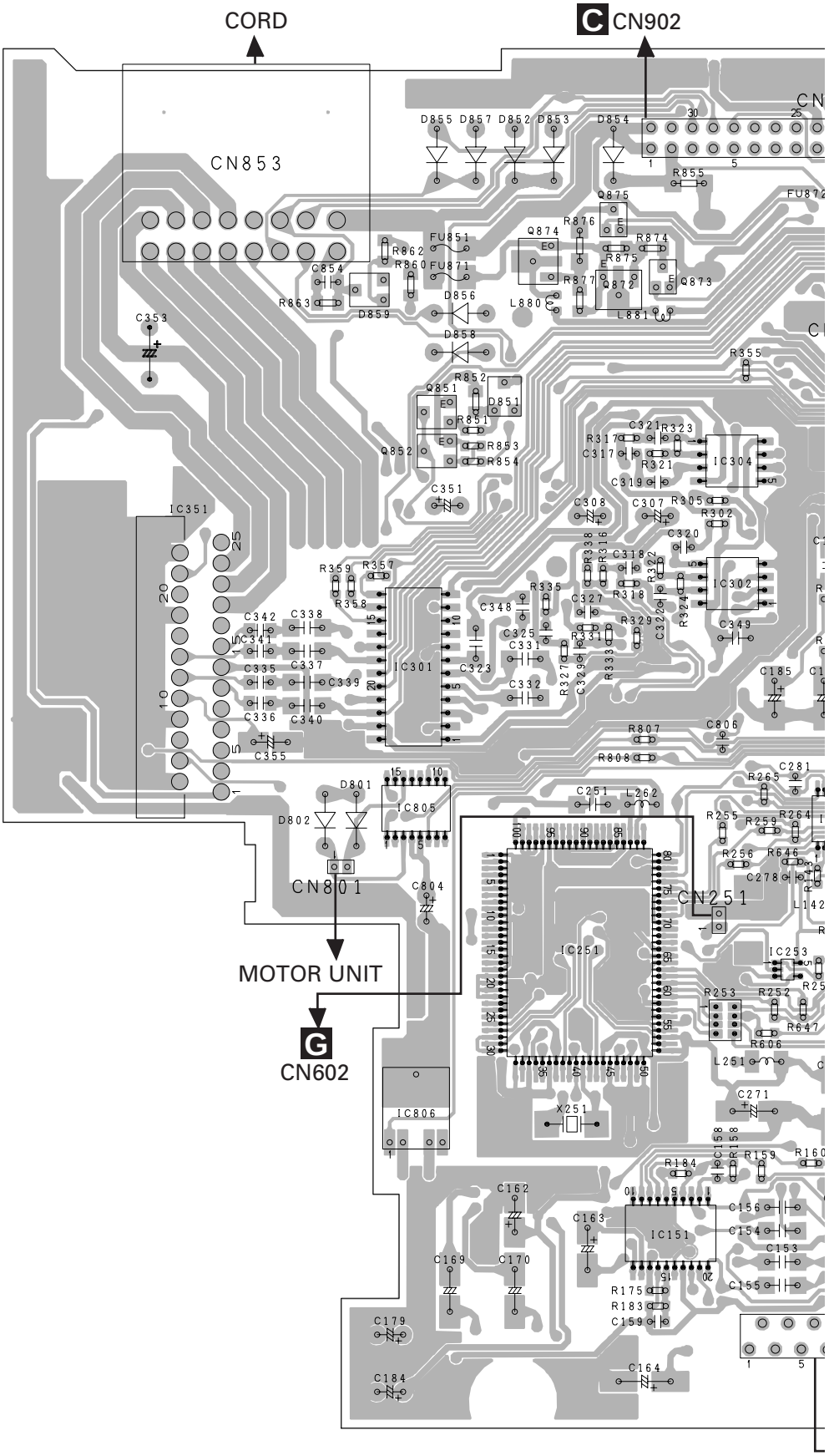
4.1 AUDIO AMP UNIT

A AUDIO AMP UNIT

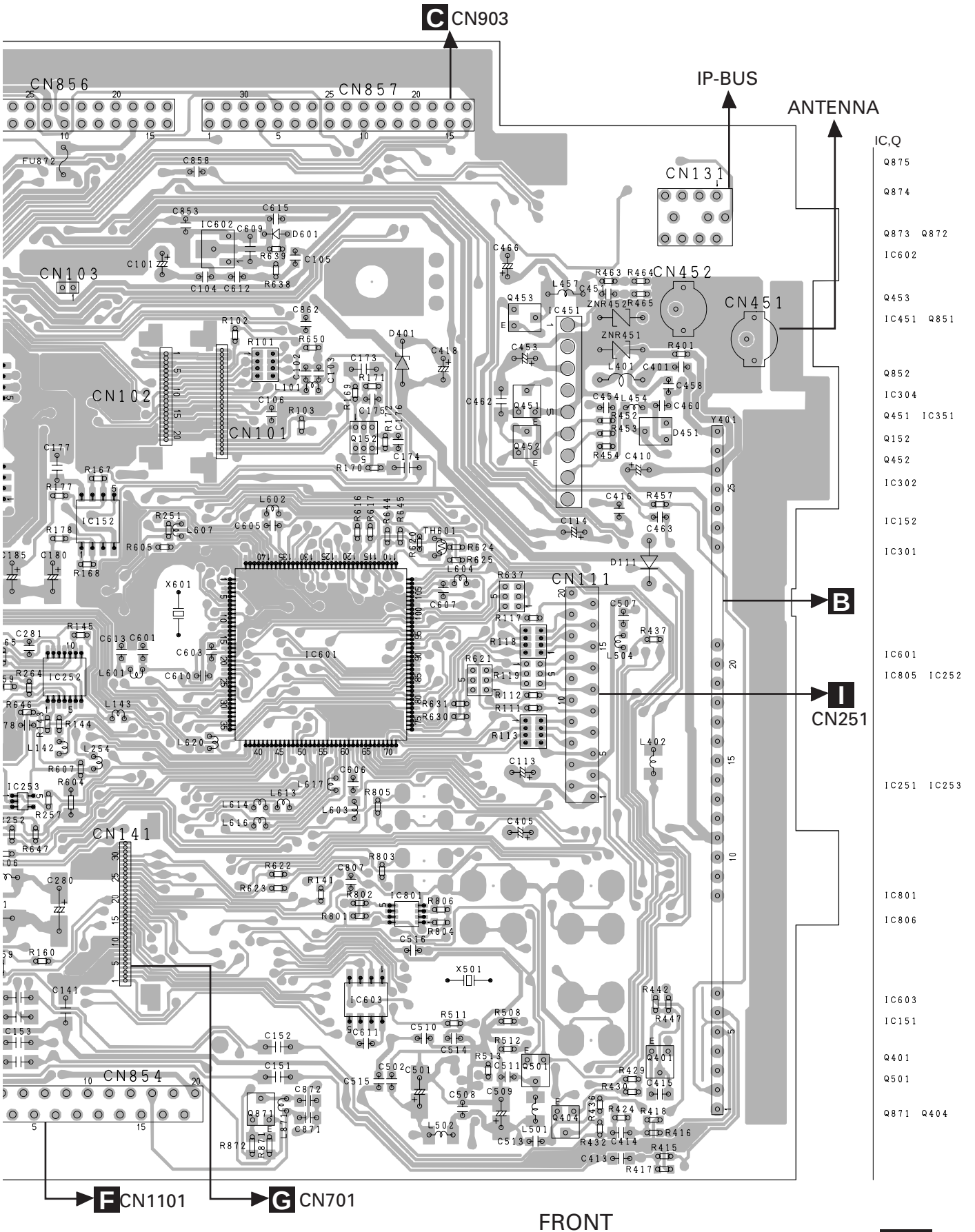
NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams

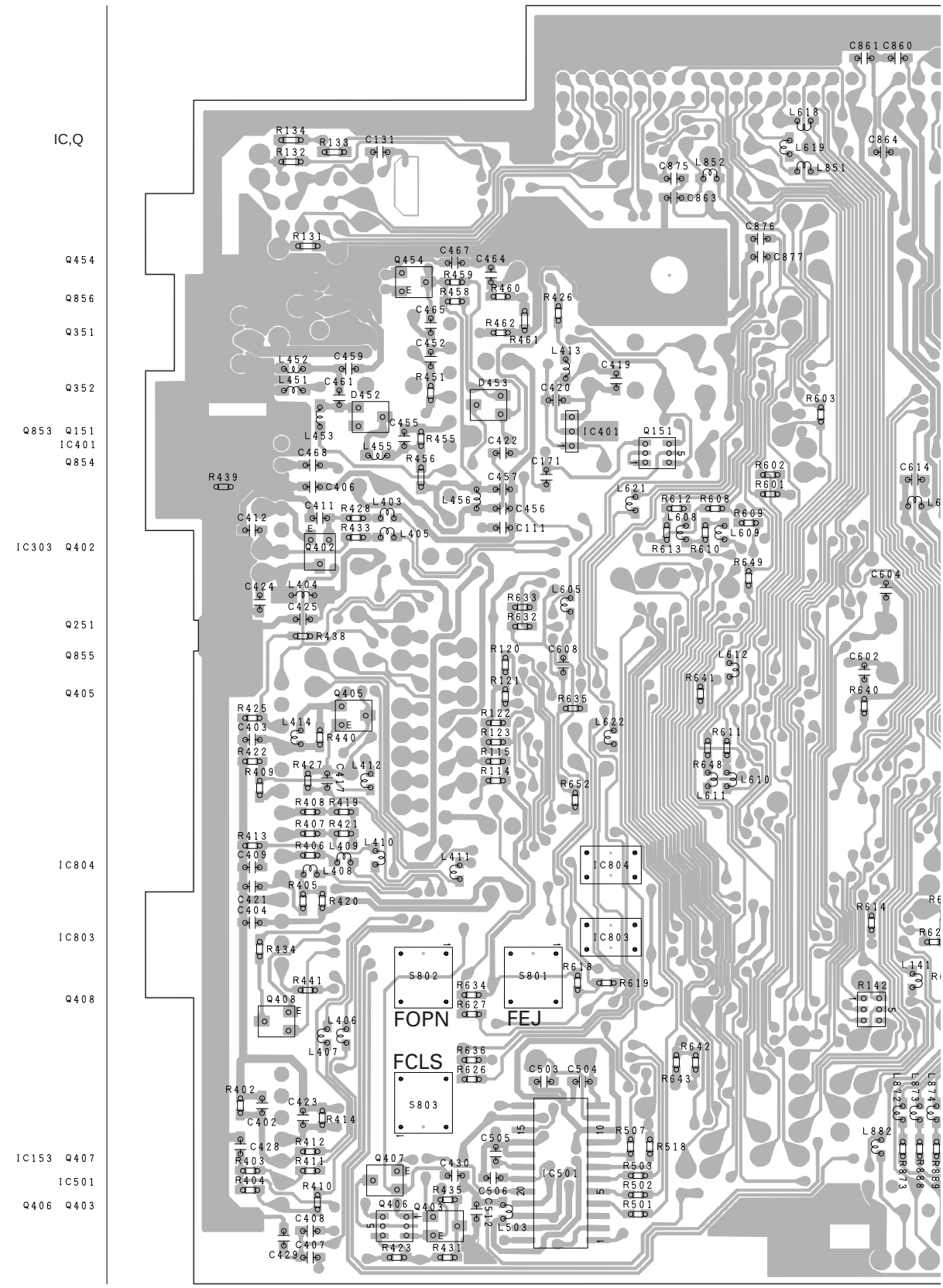




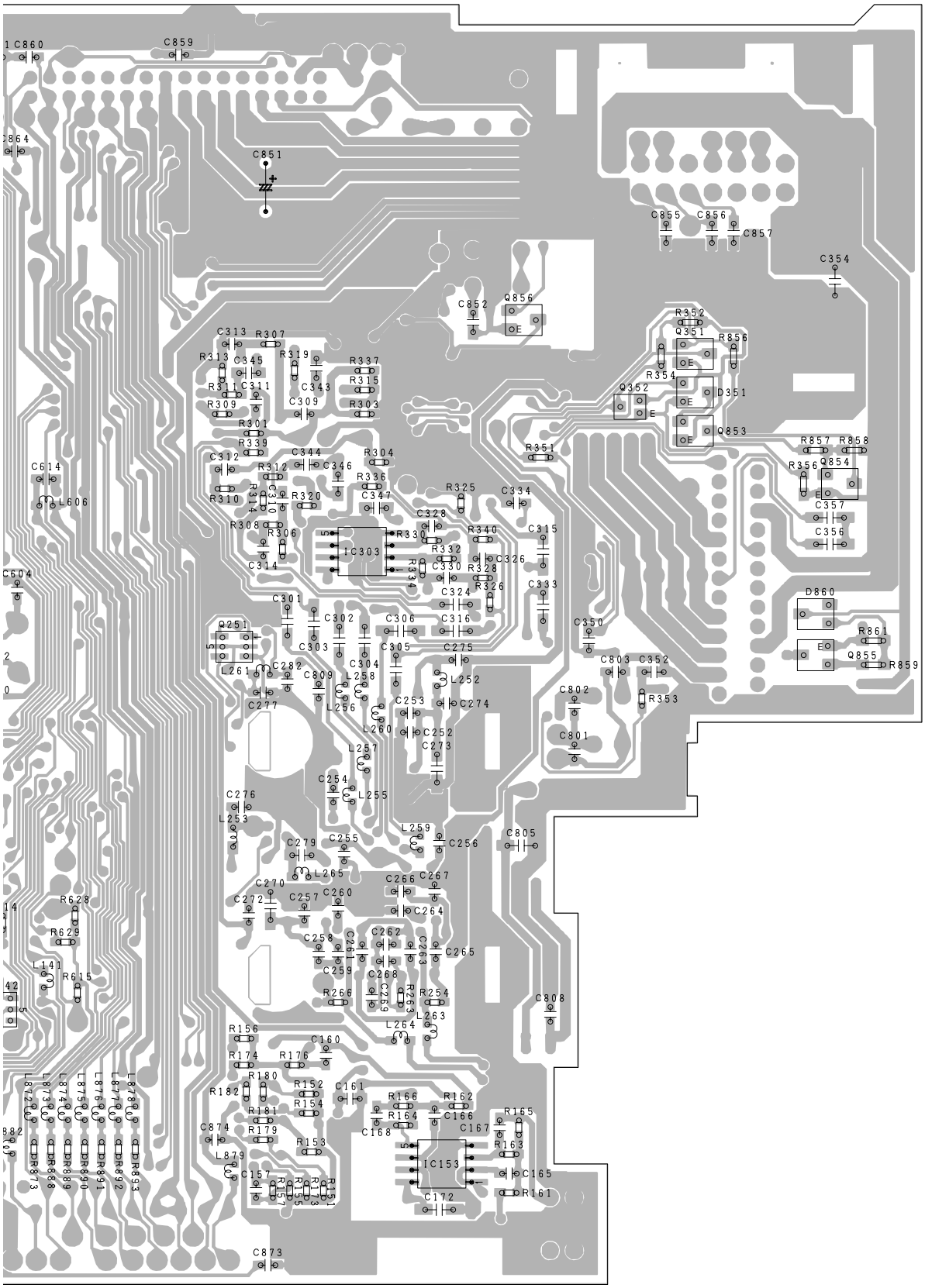
SIDE A


C CN903
IP-BUS
ANTENNA
CN856
CN857
CN131
CN452
CN451
CN103
CN102
CN101
CN111
CN141
CN854
CN1101
CN701
CN251
B
I
F
G
IC,Q
Q875
Q874
Q873 Q872
IC602
Q453
IC451 Q851
Q852
IC304
Q451 IC351
Q152
Q452
IC302
IC152
IC301
IC601
IC805 IC252
IC251 IC253
IC801
IC806
IC603
IC151
Q401
Q501
Q871 Q404
FRONT

A AUDIO AMP UNIT

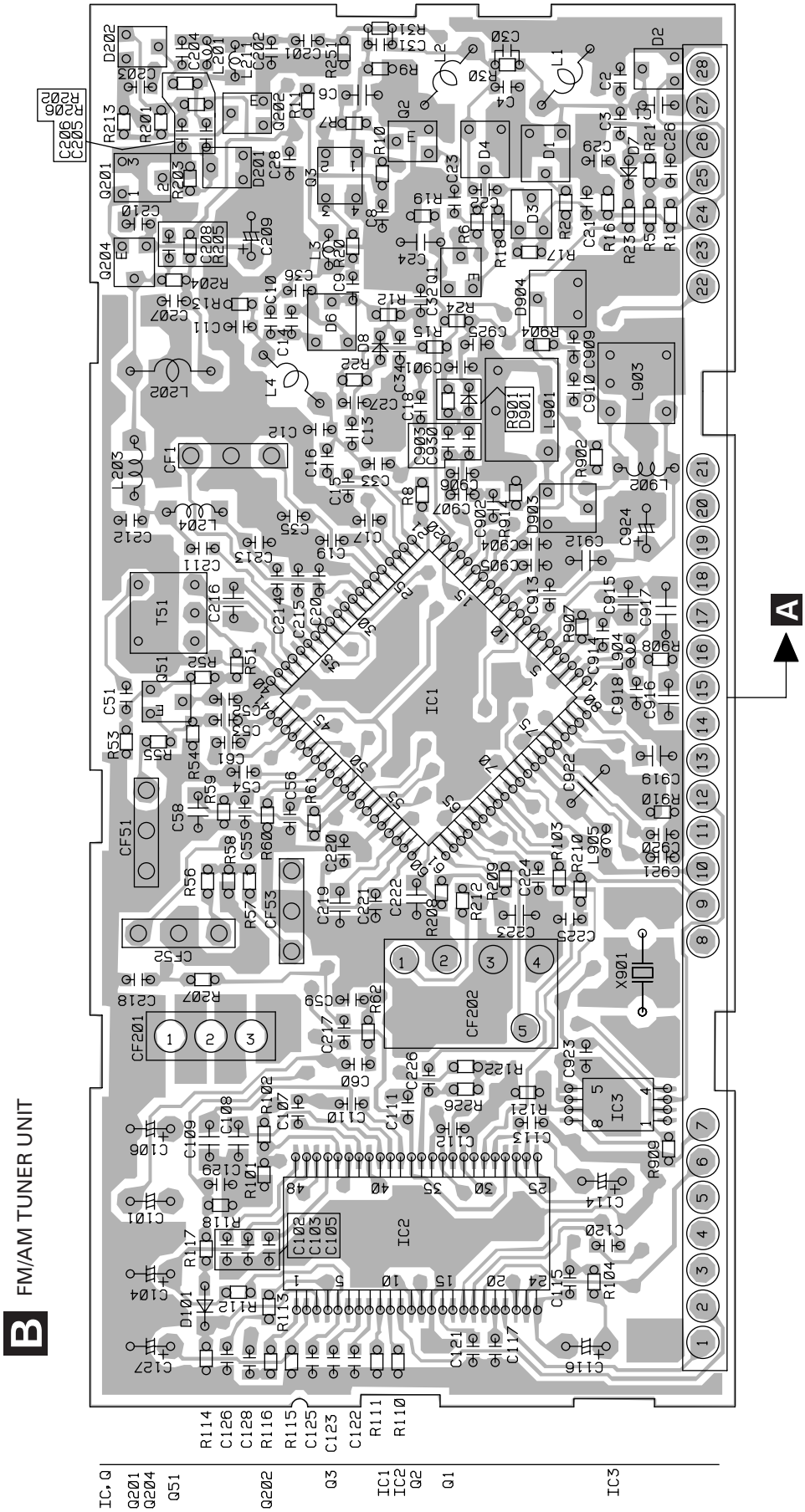


SIDE B


C859
C851
C855
C856
C857
C354
C852
Q856
R352
Q351
R856
R354
Q352
D351
Q853
R857
R858
R351
R356
Q854
C357
C356
C334
R325
C328
R340
C315
R330
R332
C326
C330
R328
R326
C324
C333
IC303
C301
C302
C306
C316
C350
D860
R861
Q855
R859
C803
C352
R353
C802
C801
Q251
C303
C305
C275
C304
C282
C309
L258
L256
L252
C277
C253
C274
C260
C252
C273
L257
C254
L255
C276
L253
C279
C255
L259
C256
C805
C270
C272
C257
C260
C266
C267
C264
R628
R629
L141
R615
C258
C262
C265
C259
C268
R266
R254
L263
L264
C308
R156
C160
R174
R176
R180
R182
R152
C161
R154
R181
R179
C874
L879
R153
C157
R166
R162
R164
C166
C168
C167
R165
R163
IC153
C165
R161
C172
C873
C860
C864
C614
L606
C604
R310
R320
R308
R306
C314
C312
R312
C344
C346
R336
C347
R304
R307
R313
C345
R319
R337
R315
C343
R311
C311
R309
C309
R303
R301
R339

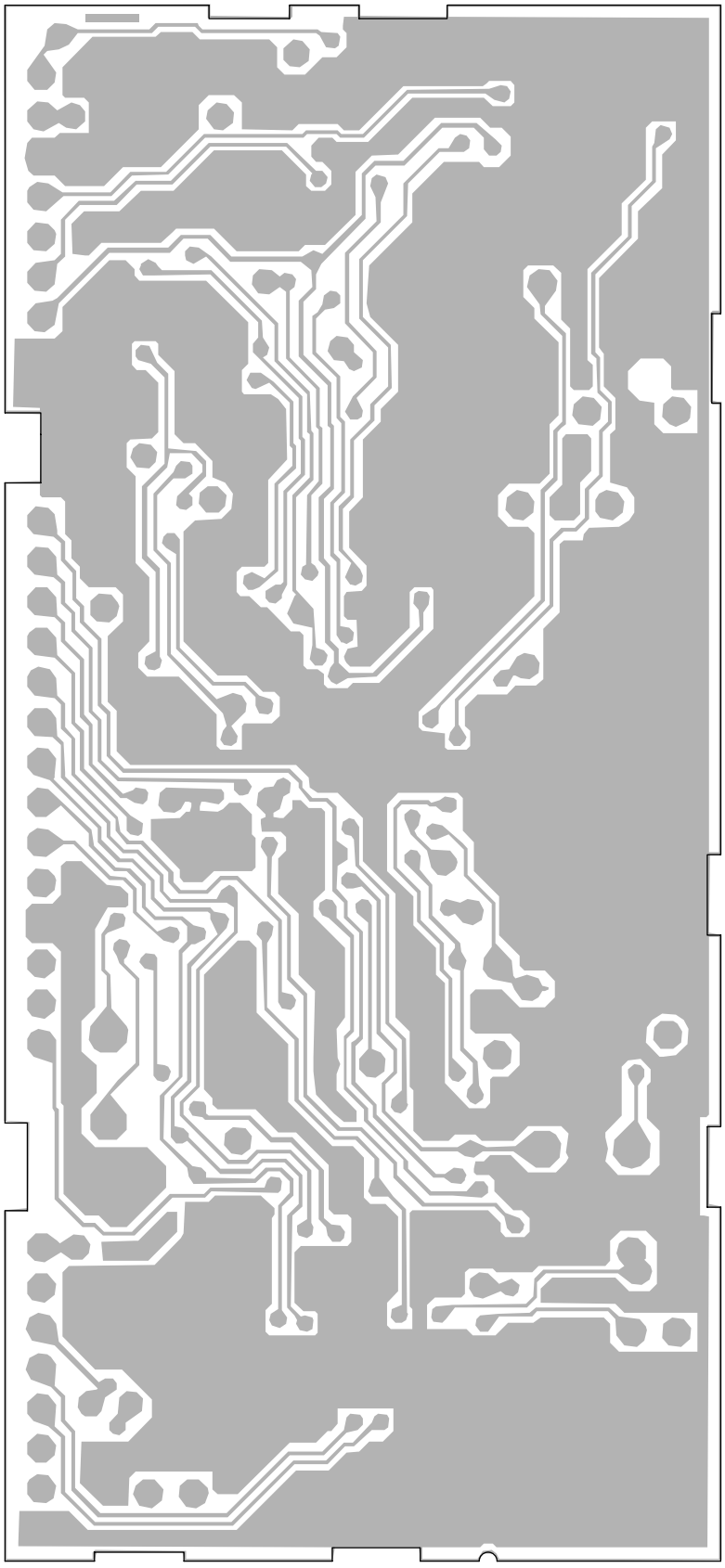
4.2 FM/AM TUNER UNIT

SIDE A



B

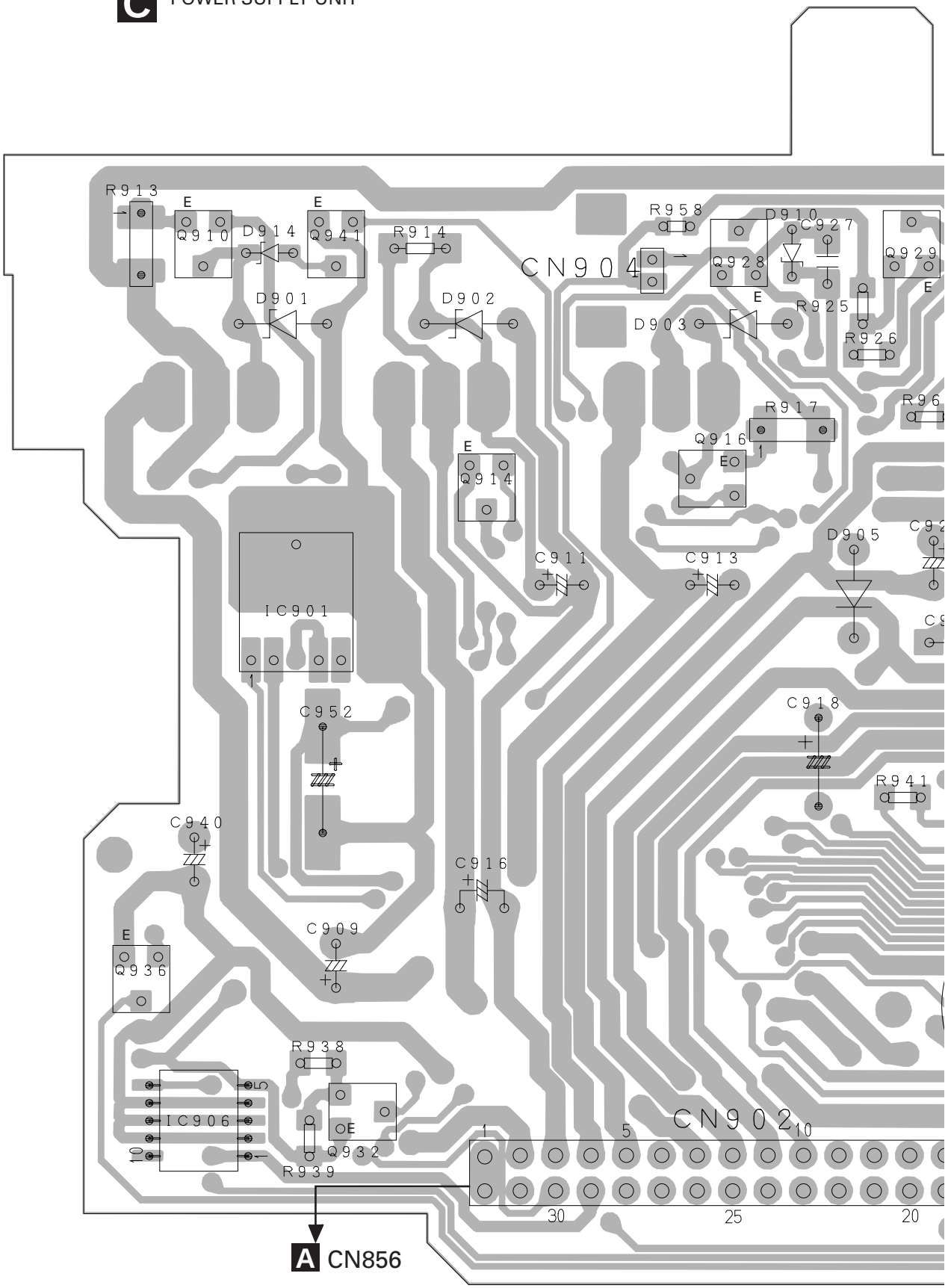
SIDE B



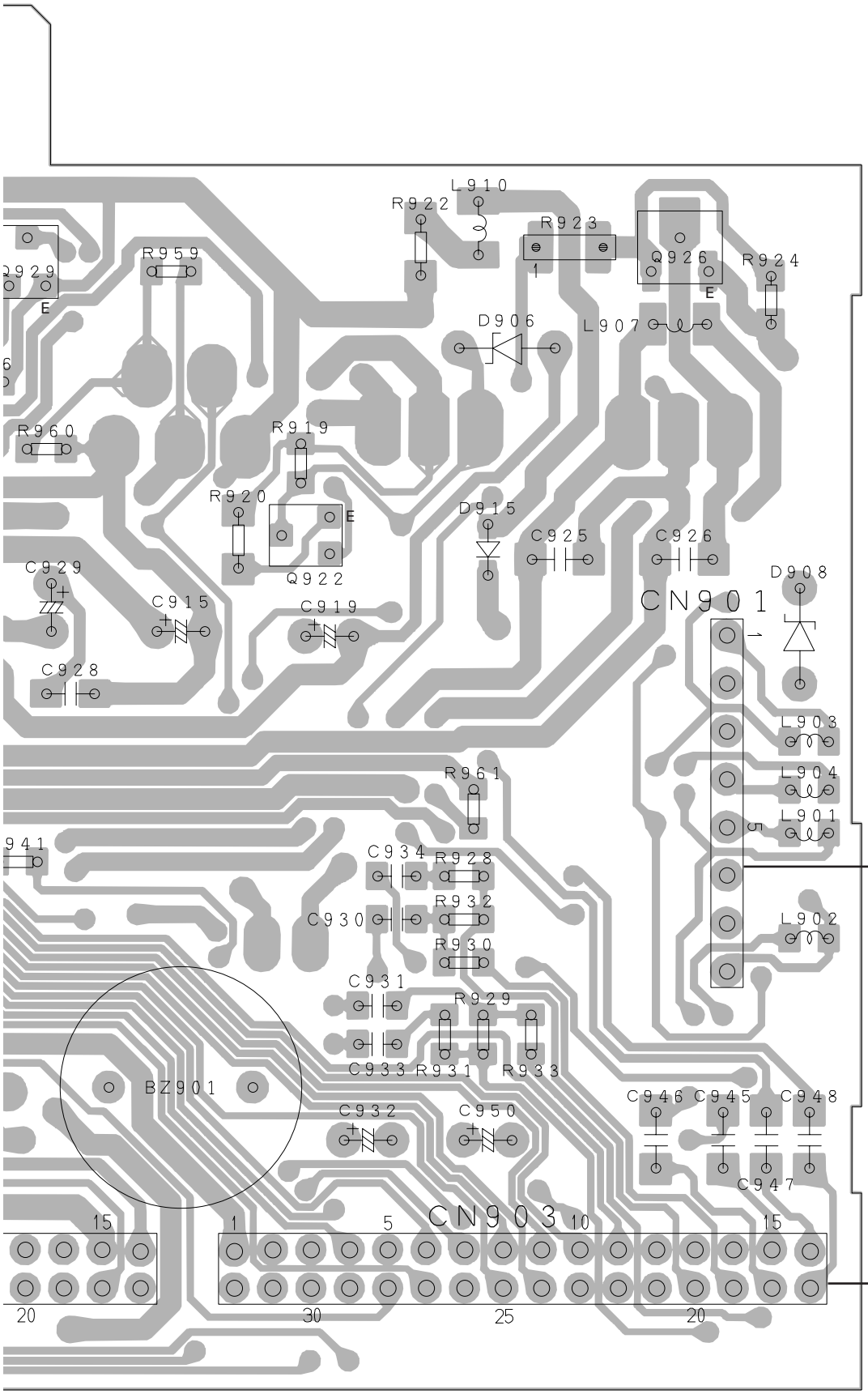
B FM/AM TUNER UNIT

4.3 POWER SUPPLY UNIT

C POWER SUPPLY UNIT



SIDE A



IC,Q

A

Q910 Q941
Q926
Q929 Q928

B

Q916
Q914
Q922
IC901

C

Q936

D

IC906
Q932

C POWER SUPPLY UNIT

IC,Q

Q912 Q909 Q930
Q921 Q915
IC907 IC903

IC902

Q917 Q913 Q911

Q925 Q923

Q938

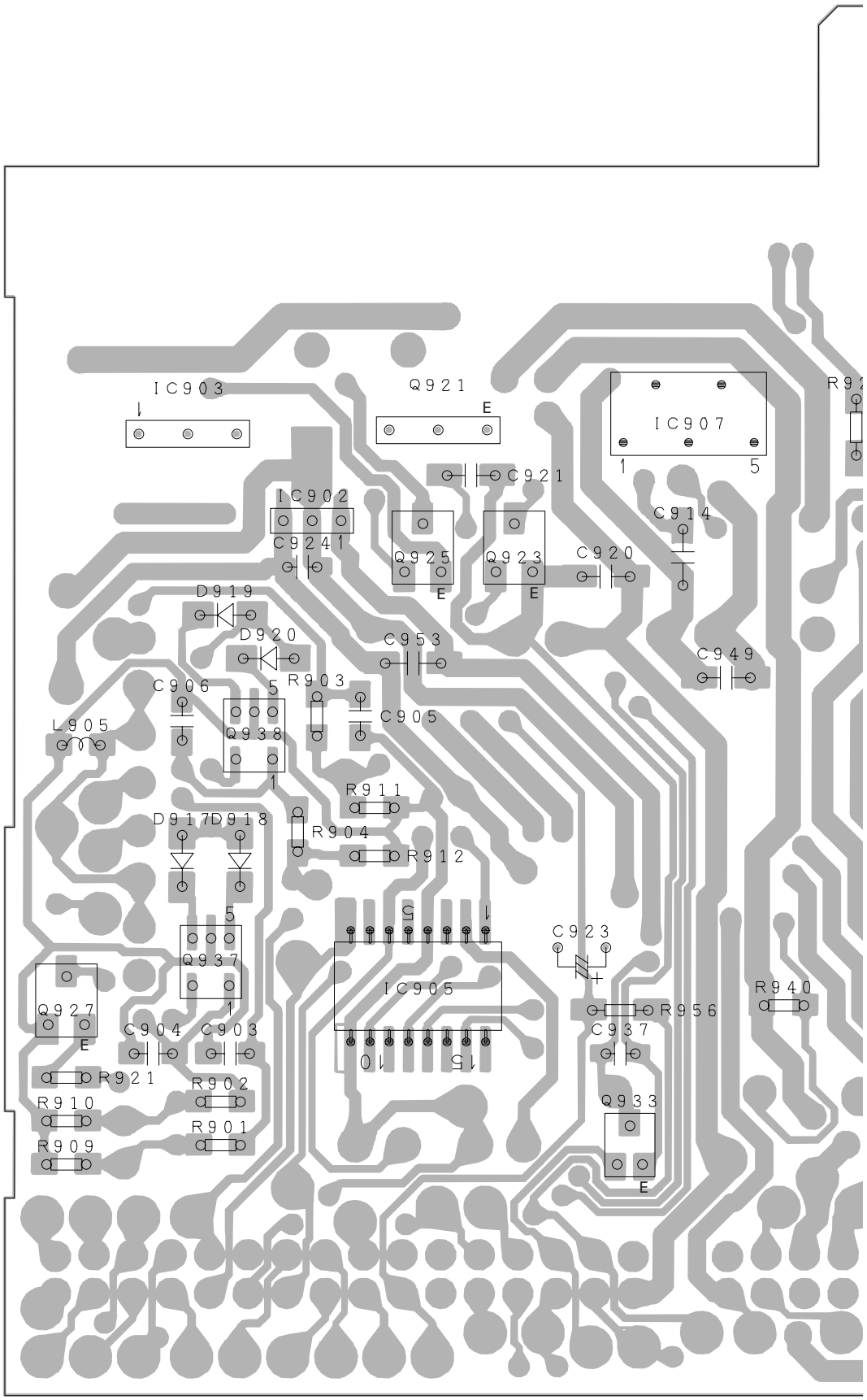
IC904 Q935

Q937

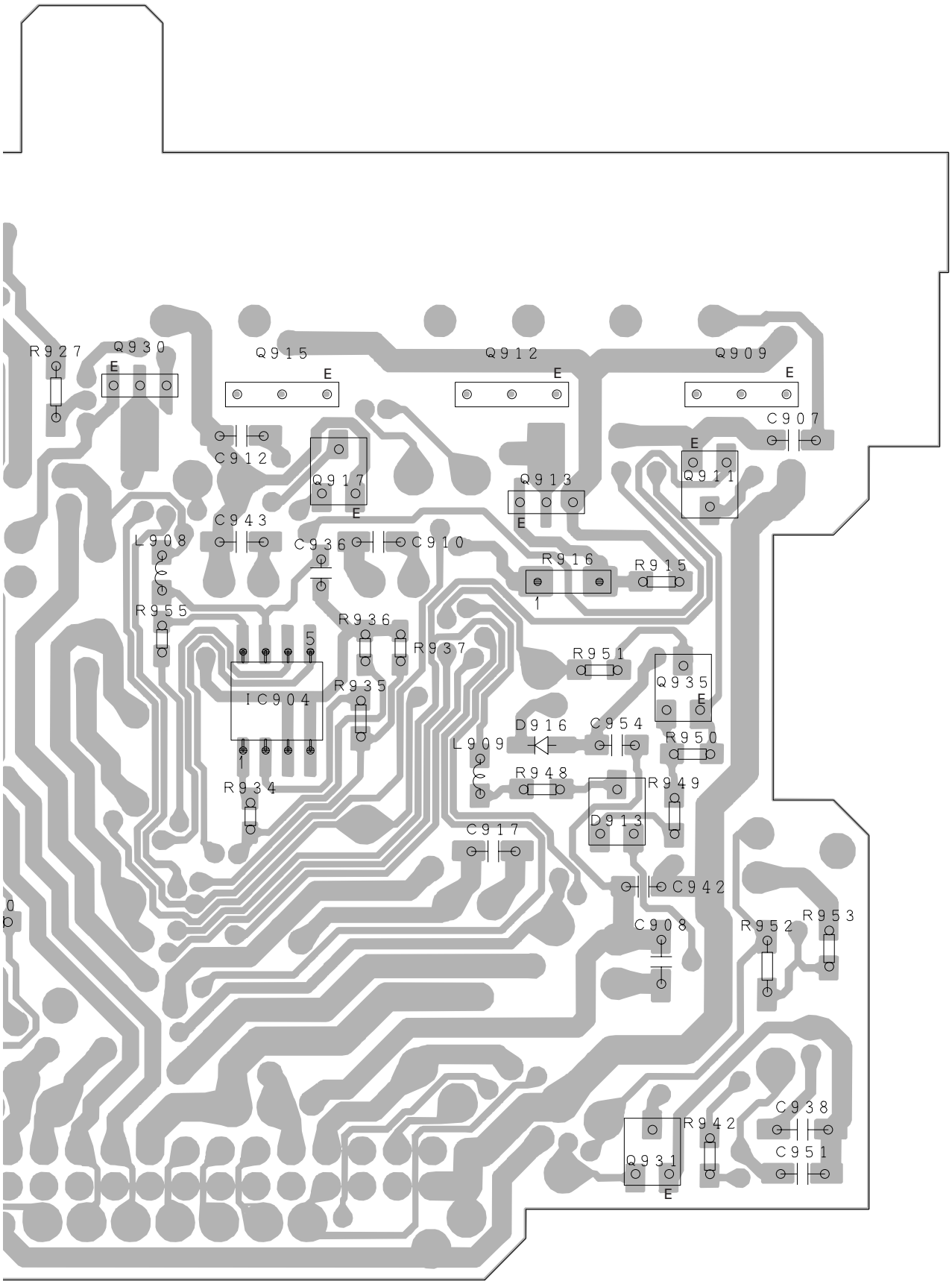
Q927 IC905

Q933

Q931



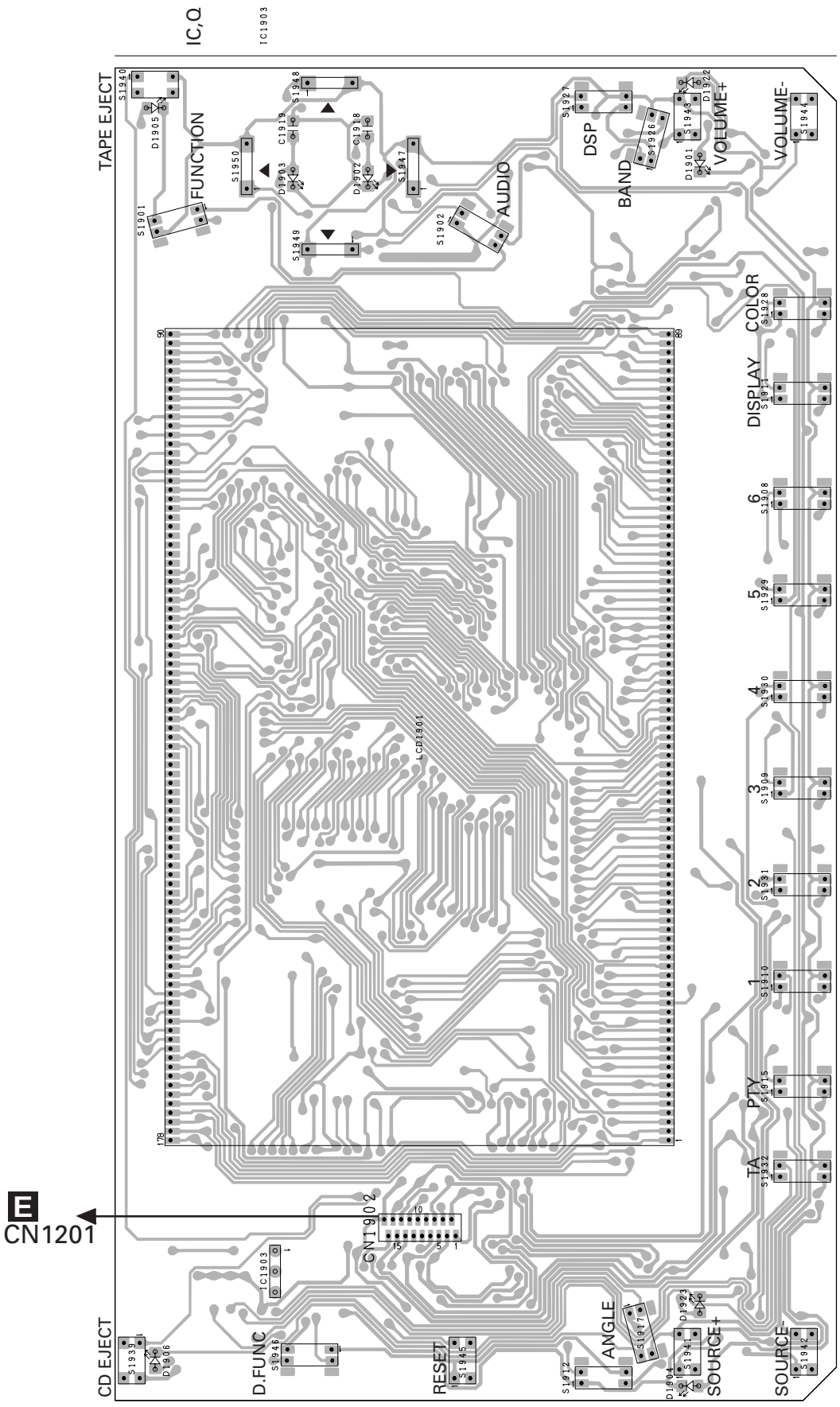
SIDE B


R927
Q930
Q915
Q912
Q909
C907
C912
Q917
Q913
Q911
C943
L908
C936
C910
R916
R915
R955
R936
R937
R951
IC904
R935
Q935
D916
C954
L909
R950
R948
R949
R934
D913
C917
C942
C908
R952
R953
C938
R942
C951
Q931

4.4 FLAP PCB

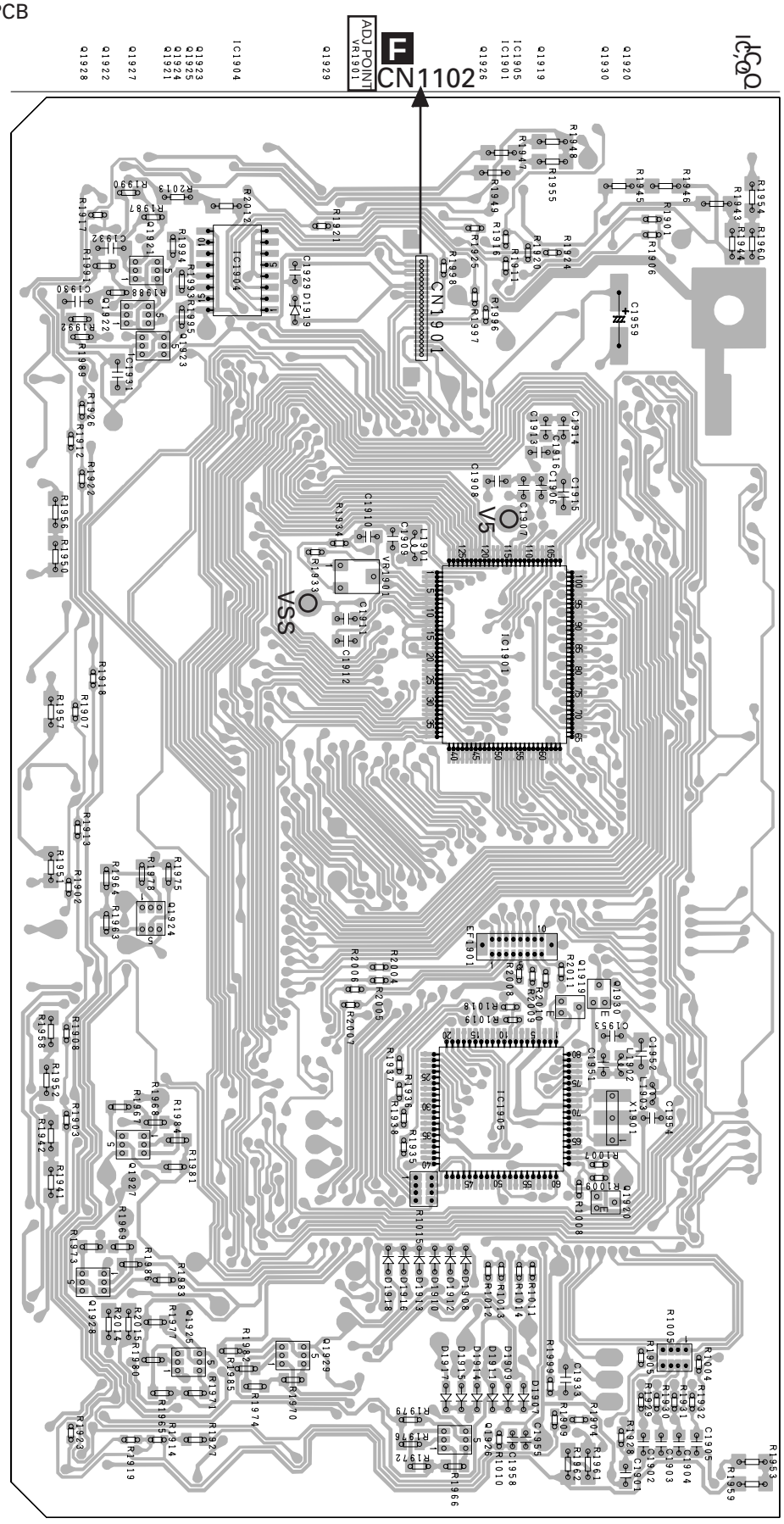
D FLAP PCB

SIDE A

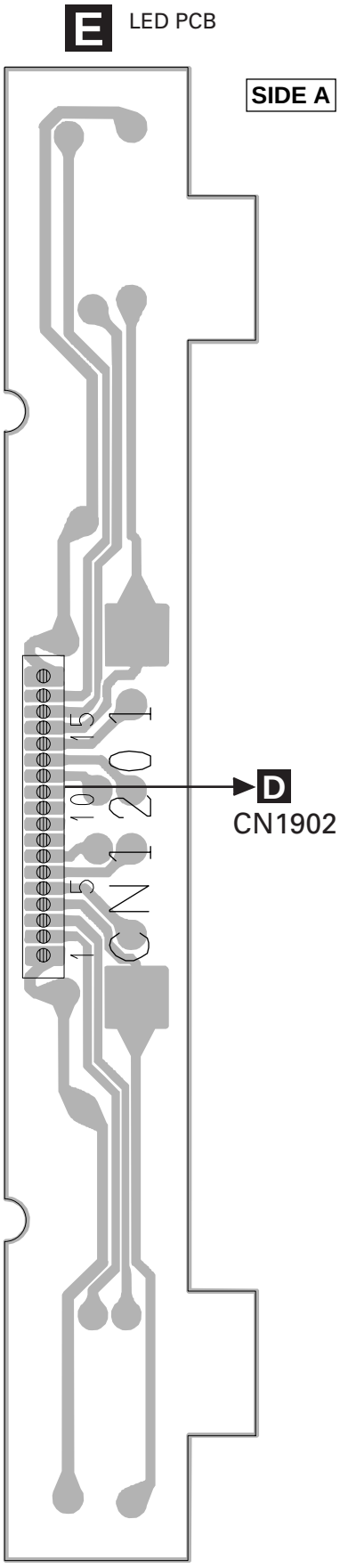


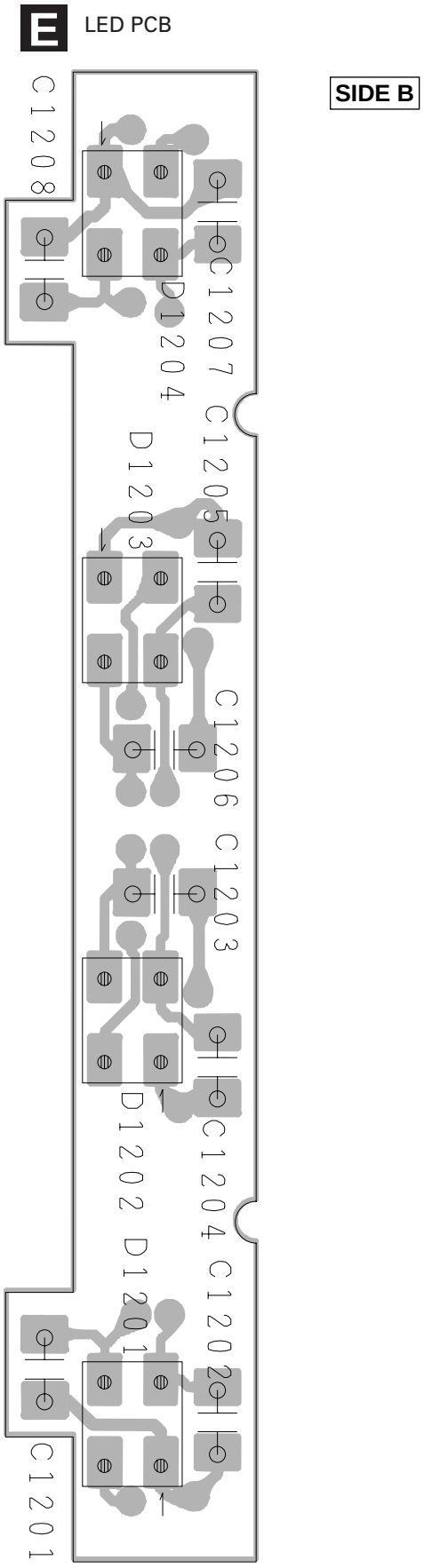
D FLAP PCB

SIDE B



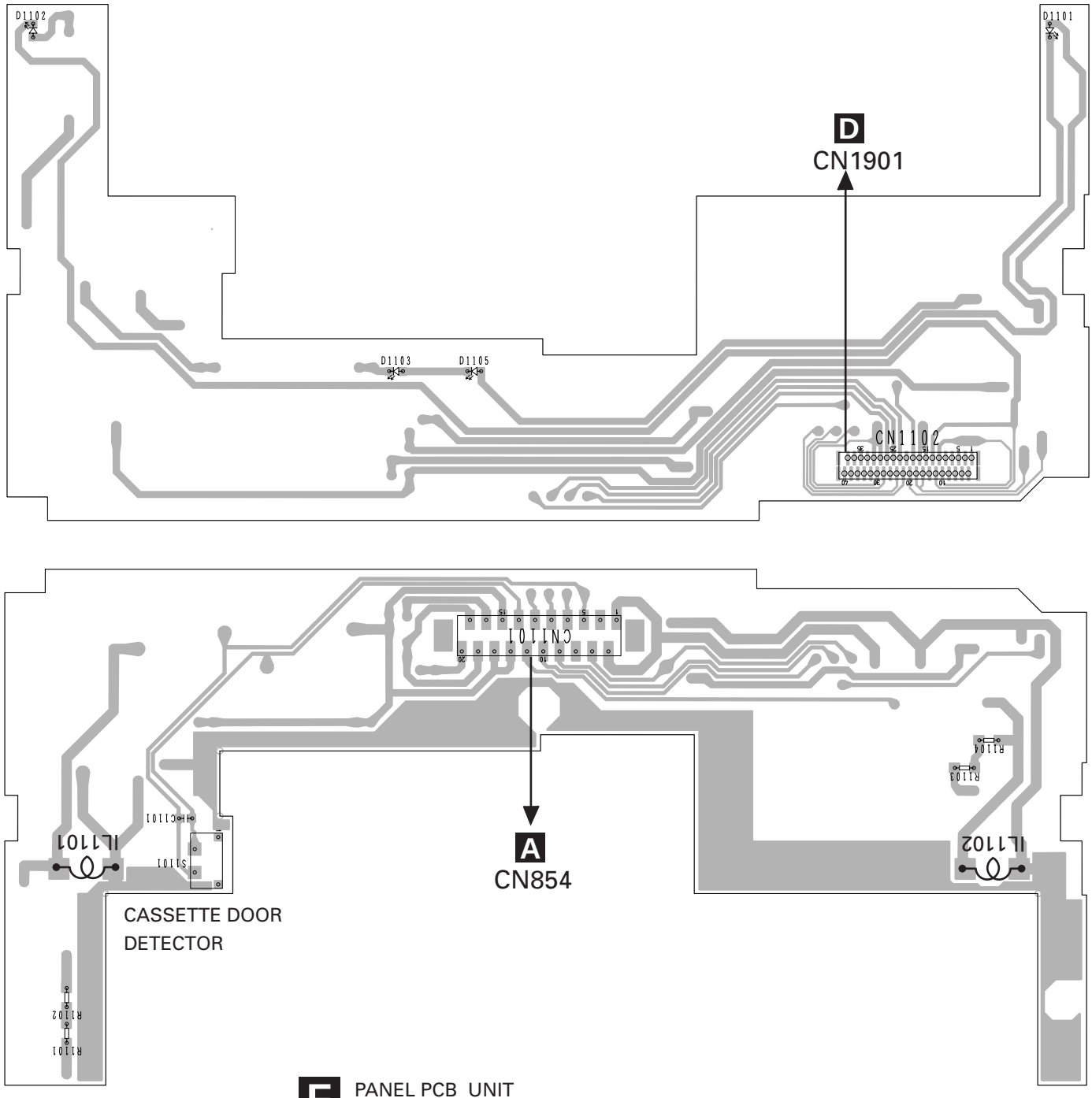
4.5 LED PCB


E
LED PCB
SIDE A
D
CN1902


E
LED PCB
SIDE B
C1208
C1207
D1204
C1205
D1203
C1206
C1203
C1204
D1202
D1201
C1202
C1201

4.6 PANEL PCB UNIT

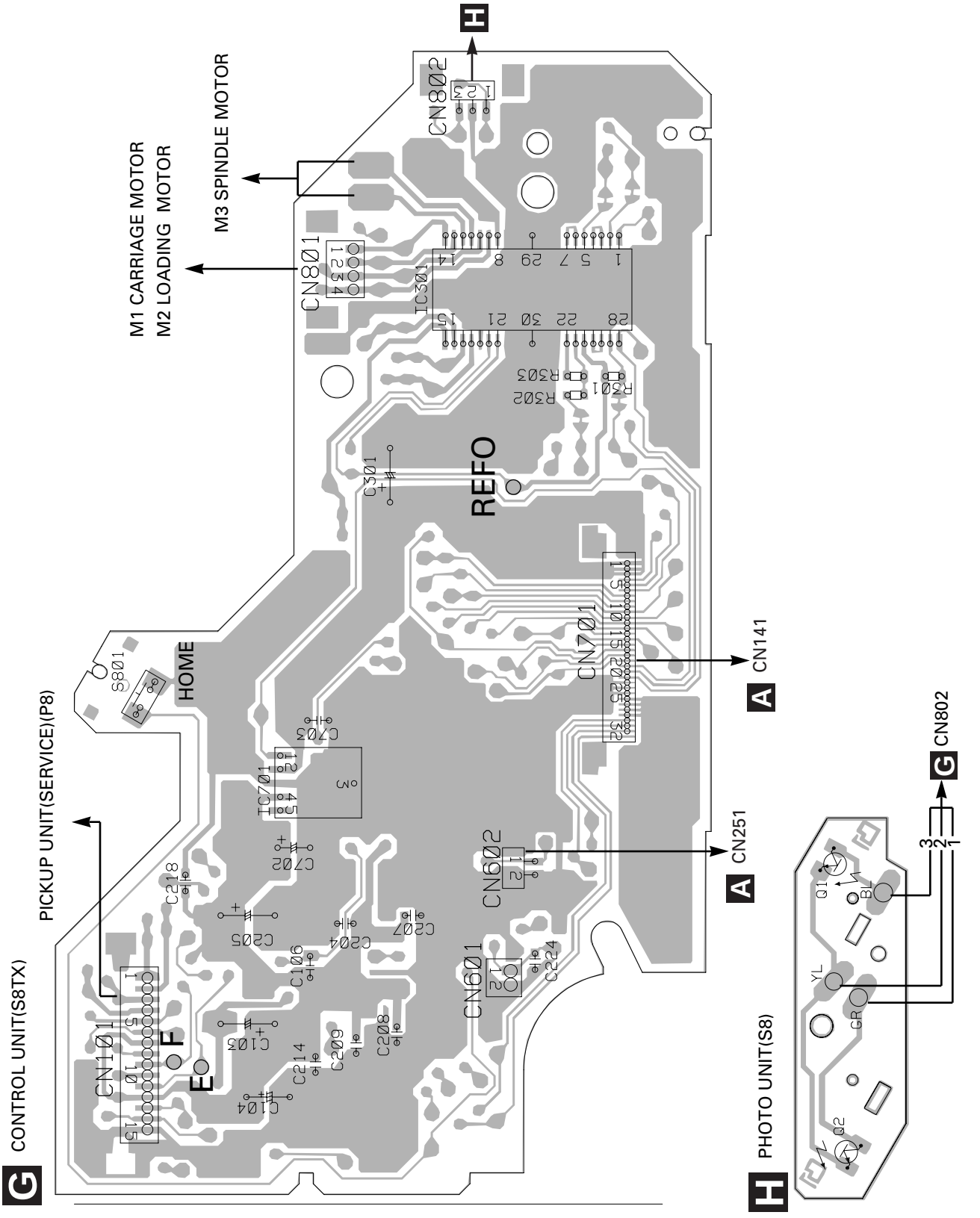
F PANEL PCB UNIT



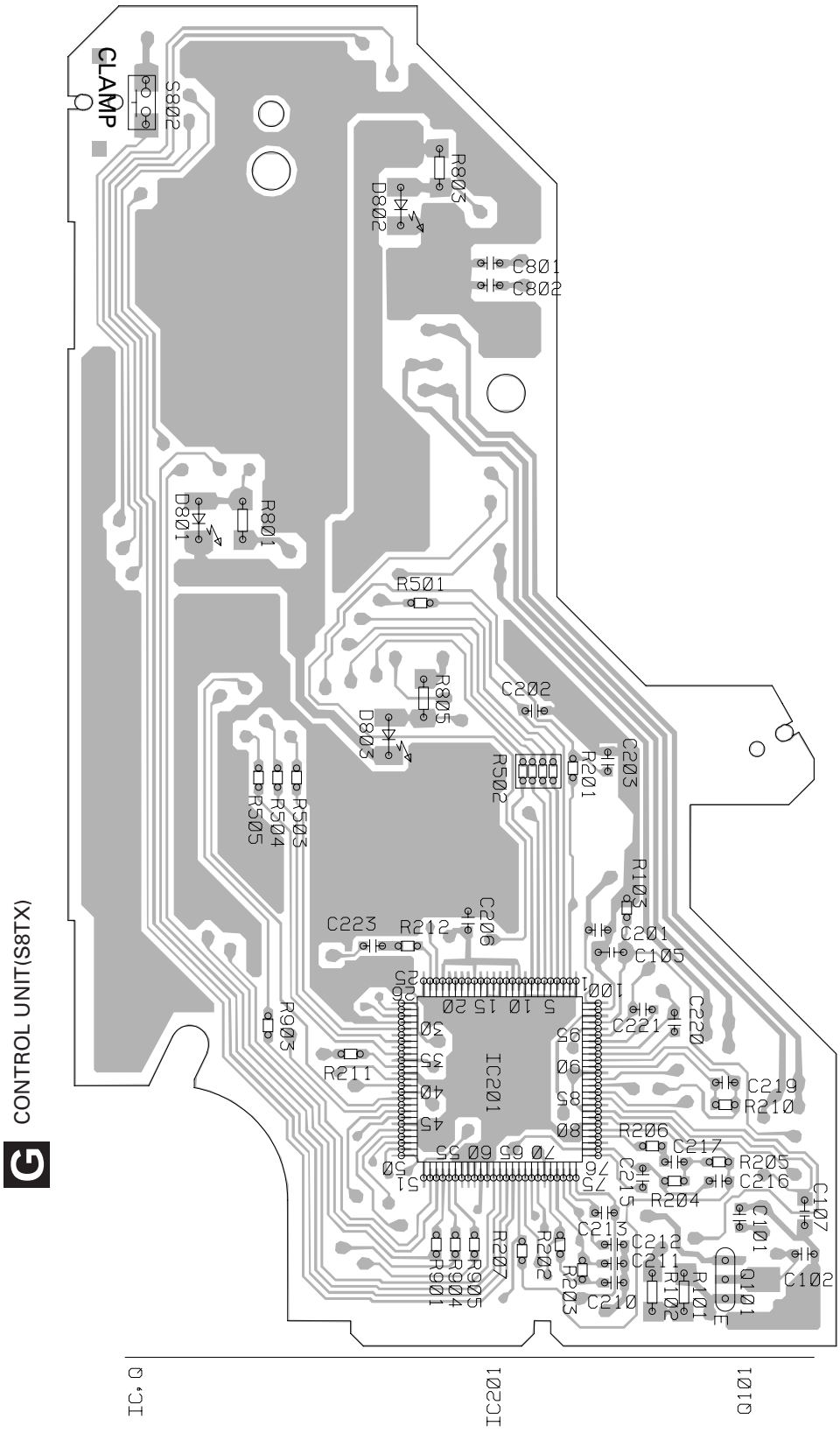
F PANEL PCB UNIT

4.7 CD MECHANISM MODULE

SIDE A



SIDE B

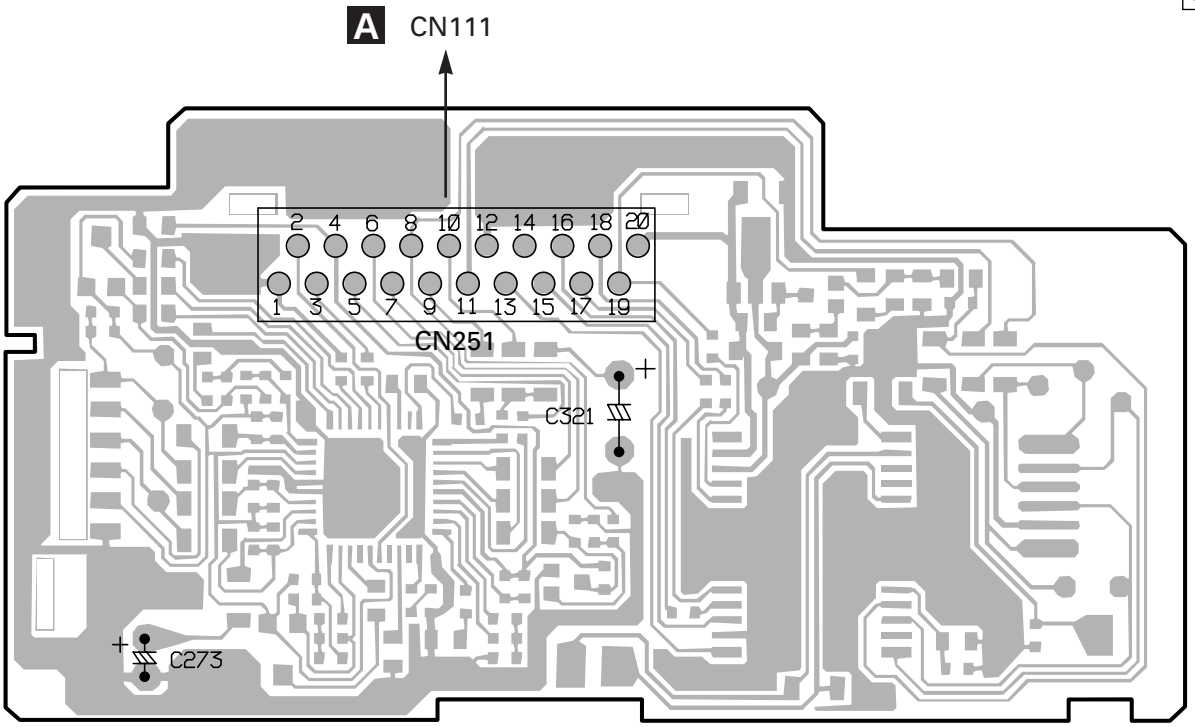


CONTROL UNIT(S8TX)

4.8 CASSETTE MECHANISM MODULE

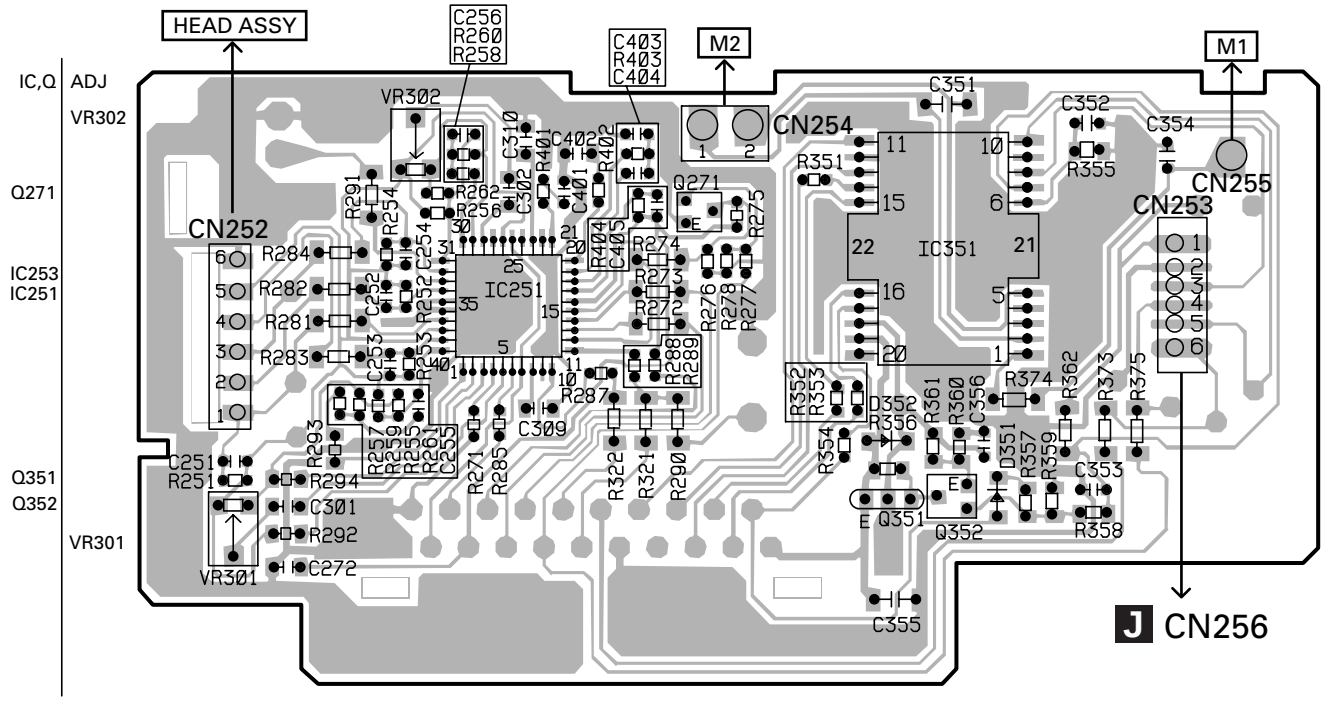
DECK UNIT

SIDE A

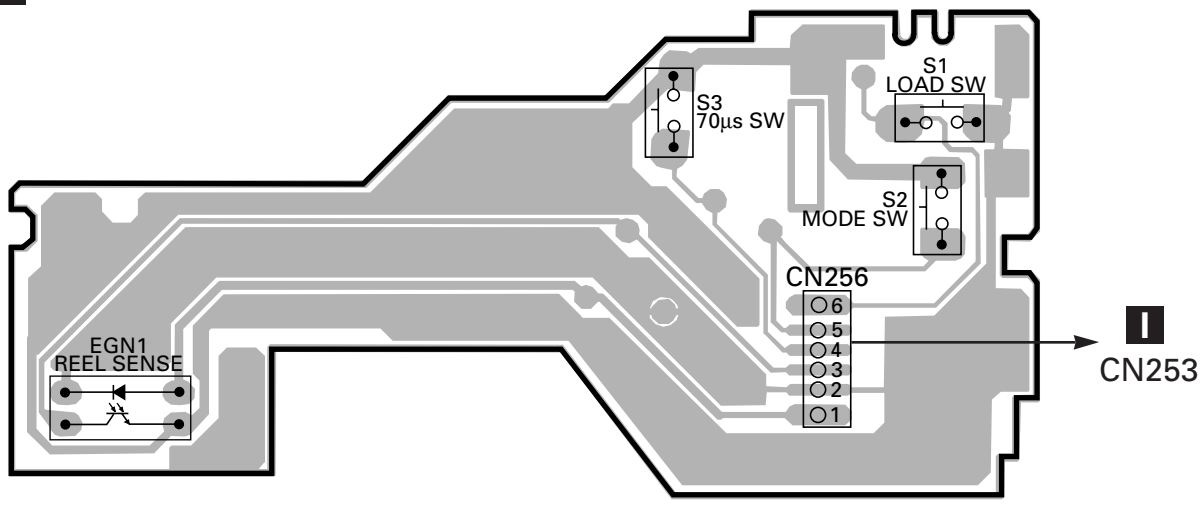


DECK UNIT

SIDE B



J REEL SENSE PCB



5. ELECTRICAL PARTS LIST

NOTES:

● Parts whose parts numbers are omitted are subject to being not supplied.

● The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

B Unit Number : CWE1500(FH-P6600R/EW)
Unit Name : FM/AM Tuner Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	1	IC	PML002A
IC	2	IC	PM4008A
IC	3	IC	BR9010FV
Q	1	Transistor	2SC4081
Q	2	Transistor	DTC124EU
Q	3	FET	3SK263
Q	51	Transistor	2SC4081
Q	201	FET	2SK932
Q	202	Transistor	DTC124EU
Q	204	Transistor	2SC4081
D	1	Diode	KV1410(23)
D	2	Diode	1SV248
D	4	Diode	KV1410(23)
D	6	Diode	KV1410(23)
D	101	Diode	1SS355
D	201	Diode	DAN217U
D	202	Diode	DAN217U
D	903	Diode	KV1410(23)
D	904	Diode	SVC253
L	1	Coil	CTC1155
L	2	Coil	CTC1155
L	3	Inductor	LCTB100K2125
L	4	Coil	CTC1155
L	201	Inductor	LCTB330M1608
L	202	Inductor	CTF1287
L	203	Inductor	LCTA121J3225
L	901	Coil	CTC1154
L	902	Inductor	LCTA3R3J3225
L	904	Inductor	LCTBR47M1608
L	905	Inductor	LCTBR47M1608
T	51	Coil	CTE1132
CF	51	Ceramic Filter	CTF1442
CF	52	Ceramic Filter	CTF1442
CF	53	Ceramic Filter	CTF1442
CF	202	Ceramic Filter	CTF1348
X	901	Crystal Resonator 10.250MHz	CSS1432

RESISTORS

=====Circuit Symbol and No.		===Part Name	Part No.
R	1		RS1/16S153J
R	2		RS1/16S103J
R	6		RS1/16S103J
R	7		RS1/16S273J
R	8		RS1/16S473J
R	9		RS1/16S223J
R	10		RS1/16S473J
R	11		RS1/16S221J
R	12		RS1/16S103J
R	13		RS1/16S104J
R	16		RS1/16S223J
R	17		RS1/16S221J
R	18		RS1/16S221J
R	19		RS1/16S473J
R	20		RS1/16S470J
R	51		RS1/16S470J
R	52		RS1/16S103J
R	53		RS1/16S103J
R	54		RS1/16S331J
R	55		RS1/16S331J
R	56		RS1/16S560J
R	57		RS1/16S560J
R	58		RS1/16S102J
R	59		RS1/16S225J
R	60		RS1/16S133J
R	61		RS1/16S433J
R	62		RS1/16S562J
R	101		RS1/16S333J
R	102		RS1/16S103J
R	103		RS1/16S333J
R	104		RS1/16S562J
R	110		RS1/16S154J
R	111		RS1/16S273J
R	112		RS1/16S223J
R	113		RS1/16S222J
R	114		RS1/16S333J
R	115		RS1/16S334J
R	116		RS1/16S473J
R	117		RS1/16S333J
R	118		RS1/16S223J
R	122		RS1/16S0R0J
R	202		RS1/16S472J
R	203		RS1/16S225J
R	204		RS1/16S102J
R	205		RS1/16S220J
R	206		RS1/16S471J
R	208		RS1/16S104J
R	209		RS1/16S104J
R	210		RS1/16S563J
R	213		RS1/16S223J
R	251		RS1/16S225J
R	902		RS1/16S103J
R	904		RS1/16S473J
R	907		RS1/16S103J
R	908		RS1/16S681J
R	909		RS1/16S473J
R	914		RS1/16S562J

CAPACITORS

=====Circuit Symbol and No.		===Part Name	Part No.
C	1		CCSQCH5R0C50
C	2		CCSRCH5R0C50
C	4		CCSRCJ3R0C50
C	6		CKSQYB105K10
C	8		CKSRYB222K50

=====Circuit Symbol and No.		===Part Name	Part No.
C	10		CCSRCH220J50
C	11		CCSRCH150J50
C	12		CCSRCH8R0D50
C	14		CCSRCJ3R0C50
C	15		CKSRYB103K50
C	16		CKSRYB222K50
C	17		CKSRYB222K50
C	18		CCSRCJ3R0C50
C	19		CKSRYB103K50
C	20		CKSRYB103K50
C	21		CKSRYB103K50
C	24		CKSQYB334K16
C	31		CKSRYB222K50
C	32		CCSRCH470J50
C	35		CKSRYB103K50
C	51		CKSRYB103K50
C	52		CKSRYB473K16
C	53		CCSRCK2R0C50
C	54		CKSRYB103K50
C	55		CKSRYB104K16
C	56		CKSRYB104K16
C	58		CKSQYB224K16
C	59		CKSRYB223K25
C	60		CKSRYB104K16
C	101		CEALNP100M10
C	102		CCSRCH151J50
C	103		CKSRYB473K16
C	105		CKSRYB682K25
C	106		CEAL2R2M50
C	107		CKSRYB103K50
C	108		CKSQYB474K16
C	109		CKSQYB474K16
C	110		CKSRYB104K16
C	111		CKSRYB104K16
C	112		CKSRYB104K16
C	113		CKSRYB123K25
C	114		CEAL220M6R3
C	115		CKSRYB473K16
C	116		CEAL2R2M50
C	117		CKSRYB102K50
C	120		CKSRYB153K25
C	121		CKSRYB332K50
C	122		CKSRYB682K25
C	123		CKSRYB681K50
C	125		CKSRYB103K50
C	126		CKSRYB103K50
C	127		CEAL2R2M50
C	128		CKSRYB103K50
C	201		CCSRCH471J50
C	202		CCSRCH100D50
C	203		CKSRYB104K16
C	204		CKSRYB332K50
C	205		CKSRYB103K50
C	206		CKSRYB104K16
C	207		CKSRYB473K16
C	208		CCSRCH560J50
C	209		CEAL470M6R3
C	210		CKSRYB103K50
C	211		CKSRYB103K50
C	212		CCSRCH101J50
C	215		CKSRYB223K25
C	216		CKSQYB334K16
C	217		CKSRYB103K50
C	219		CKSQYB105K10
C	220		CKSRYB104K16

=====Circuit Symbol and No.		===Part Name	Part No.
C	221		CKSRYB473K16
C	222		CKSQYB334K16
C	223		CKSQYB474K16
C	224		CKSRYB104K16
C	225		CKSRYB272K50
C	226		CKSRYB682K25
C	902		CCSRCH270J50
C	904		CKSRYB223K25
C	905		CKSRYB103K50
C	906		CCSRTH100D50
C	907		CCSRTH150J50
C	909		CCSRTH100D50
C	910		CKSRYB332K50
C	912		CKSQYB474K16
C	913		CKSRYB223K25
C	914		CKSRYB682K25
C	915		CKSQYB223K25
C	916		CKSQYB474K16
C	917		CKSYB475K10
C	918		CKSRYB223K25
C	919		CKSQYB225K10
C	920		CCSRCH270J50
C	921		CCSRCH270J50
C	922		CKSYB105K16
C	923		CKSRYB103K50

B Unit Number : CWE1501(FH-P6600/ES)
Unit Name : FM/AM Tuner Unit

MISCELLANEOUS

IC	1	IC	PML002A
IC	2	IC	PM4008A
IC	3	IC	BR9010FV
Q	1	Transistor	2SC4081
Q	2	Transistor	DTC124EU
Q	3	FET	3SK263
Q	51	Transistor	2SC4081
Q	201	FET	2SK932
Q	202	Transistor	DTC124EU
Q	204	Transistor	2SC4081
D	1	Diode	KV1410(23)
D	2	Diode	1SV248
D	6	Diode	KV1410(23)
D	201	Diode	DAN217U
D	202	Diode	MA147
D	903	Diode	KV1410(23)
D	904	Diode	SVC253
L	1	Coil	CTC1155
L	3	Inductor	LCTB1R5K2125
L	4	Coil	CTC1155
L	201	Inductor	LCTB330K1608
L	202	Inductor	LFEA102J
L	203	Inductor	LCTA121J3225
L	901	Coil	CTC1154
L	902	Inductor	LCTA3R3J3225
L	904	Inductor	LCTBR47K1608
L	905	Inductor	LCTBR47K1608
T	51	Coil	CTE1132
CF	51	Ceramic Filter	CTF1442
CF	52	Ceramic Filter	CTF1442
CF	53	Ceramic Filter	CTF1442
CF	202	Ceramic Filter	CTF1476
X	901	Crystal Resonator 10.250MHz	CSS1432

Circuit Symbol and No.	Part Name	Part No.
RESISTORS		
R 1		RS1/16S183J
R 2		RS1/16S103J
R 5		RS1/16S0R0J
R 7		RS1/16S273J
R 8		RS1/16S473J
R 9		RS1/16S223J
R 10		RS1/16S473J
R 11		RS1/16S221J
R 12		RS1/16S103J
R 13		RS1/16S104J
R 16		RS1/16S223J
R 17		RS1/16S221J
R 18		RS1/16S221J
R 19		RS1/16S473J
R 20		RS1/16S470J
R 31		RS1/16S0R0J
R 51		RS1/16S470J
R 52		RS1/16S103J
R 53		RS1/16S103J
R 54		RS1/16S331J
R 55		RS1/16S331J
R 56		RS1/16S560J
R 57		RS1/16S560J
R 58		RS1/16S102J
R 59		RS1/16S225J
R 60		RS1/16S133J
R 61		RS1/16S433J
R 101		RS1/16S333J
R 102		RS1/16S103J
R 103		RS1/16S333J
R 104		RS1/16S562J
R 110		RS1/16S154J
R 111		RS1/16S273J
R 113		RS1/16S222J
R 114		RS1/16S333J
R 115		RS1/16S334J
R 116		RS1/16S473J
R 202		RS1/16S472J
R 203		RS1/16S225J
R 204		RS1/16S102J
R 205		RS1/16S220J
R 206		RS1/16S471J
R 208		RS1/16S104J
R 209		RS1/16S104J
R 210		RS1/16S563J
R 213		RS1/16S223J
R 251		RS1/16S225J
R 902		RS1/16S103J
R 904		RS1/16S473J
R 907		RS1/16S103J
R 908		RS1/16S681J
R 909		RS1/16S473J
R 914		RS1/16S562J
CAPACITORS		
C 1		CCSQCH4R0C50
C 6		CKSQYB105K10
C 8		CKSRYB222K50
C 10		CCSRCH220J50
C 11		CCSRCH150J50
C 12		CCSRCH8R0D50
C 14		CCSRCJ3R0C50
C 15		CKSRYB103K50
C 16		CKSRYB222K50
C 17		CKSRYB222K50
C 18		CCSRCJ3R0C50
C 19		CKSRYB103K50
C 20		CKSRYB103K50
C 21		CKSRYB103K50
C 24		CKSQYB334K16
C 26		CKSRYB472K50
C 30		CCSRCH220J50
C 32		CCSRCH470J50
C 35		CKSRYB103K50
C 51		CKSRYB103K50
C 52		CKSRYB473K16
C 53		CCSRCK2R0C50
C 54		CKSRYB103K50
C 55		CKSRYB104K16
C 56		CKSRYB104K16
C 58		CKSQYB224K16
C 101		CEALNP100M10
C 102		CCSRCH151J50
C 103		CKSRYB473K16
C 105		CKSRYB682K25
C 106		CEALR68M50
C 107		CKSRYB103K50
C 108		CKSQYB474K16
C 109		CKSQYB474K16
C 110		CKSRYB104K16
C 111		CKSRYB104K16
C 112		CKSRYB104K16
C 113		CKSRYB123K25
C 114		CEAL220M6R3
C 115		CKSRYB473K16
C 116		CEAL2R2M50
C 117		CKSRYB102K50
C 120		CKSRYB183K25
C 121		CKSRYB332K50
C 122		CKSRYB562K25
C 123		CKSRYB681K50
C 125		CKSRYB103K50
C 126		CKSRYB103K50
C 127		CEAL2R2M50
C 128		CKSRYB103K50
C 201		CCSRCH471J50
C 202		CCSRCH100D50
C 203		CKSRYB104K16
C 204		CKSRYB332K50
C 205		CKSRYB103K50
C 206		CKSRYB104K16
C 207		CKSRYB473K16
C 208		CCSRCH560J50
C 209		CEAL470M6R3
C 210		CKSRYB103K50
C 211		CKSRYB103K50
C 212		CCSRCH101J50
C 215		CKSRYB223K25
C 216		CKSQYB334K16
C 217		CKSRYB103K50
C 219		CKSQYB105K10
C 220		CKSRYB104K16
C 221		CKSRYB473K16
C 222		CKSQYB334K16
C 223		CKSQYB474K16
C 224		CKSRYB104K16
C 225		CKSRYB272K50
C 226		CKSRYB682K25
C 902		CCSRCH270J50
C 904		CKSRYB223K25

=====Circuit Symbol and No.		===Part Name	Part No.
C	905		CKSRYB103K50
C	906		CCSRTH100D50
C	907		CCSRTH150J50
C	909		CCSRTH100D50
C	910		CKSRYB332K50
C	912		CKSQYB474K16
C	913		CKSRYB223K25
C	914		CKSRYB682K25
C	915		CKSQYB223K25
C	916		CKSQYB474K16
C	917		CKSYB475K10
C	918		CKSRYB223K25
C	919		CKSQYB225K10
C	920		CCSRCH270J50
C	921		CCSRCH270J50
C	922		CKSYB105K16
C	923		CKSRYB103K50

A Unit Number : CWM7006(FH-P6600R/EW)
Unit Name : Audio Amp Unit

MISCELLANEOUS

IC	151	IC	BA3131FS
IC	153	IC	NJM4558MD
IC	251	IC	PDG255A
IC	252	IC	TC74VHC125FT
IC	253	IC	TC7SET08FU
IC	301	IC	PM0017AM
IC	302	IC	NJM4558MD
IC	303	IC	NJM4558MD
IC	304	IC	NJM4558MD
IC	351	IC	PAL005A
IC	501	IC	PM4009A
IC	601	IC	PE5124A
IC	602	IC	S-80734ANDYI
IC	801	IC	TC7W14FU
IC	803	Photo-interrupter	GP1S94J
IC	804	Photo-interrupter	GP1S94J
IC	805	IC	BA6288FS
IC	806	IC	BA09SFP
Q	251	Transistor	IMH1A
Q	351	Transistor	DTC144EK
Q	352	Transistor	DTC144EU
Q	401	Transistor	2SC2412K
Q	402	Transistor	2SC2412K
Q	403	Transistor	2SD1757K
Q	404	Transistor	2SD1757K
Q	405	Transistor	2SC2412K
Q	406	Transistor	IMH3A
Q	407	Transistor	DTA114EK
Q	408	Transistor	DTA124EK
Q	501	Transistor	DTA124EK
Q	851	Transistor	2SC2412K
Q	852	Transistor	2SC2412K
Q	853	Transistor	DTC124EK
Q	854	Transistor	2SA1162
Q	855	Chip Transistor	2SC2712
Q	856	Chip Transistor	2SC2712
Q	871	Transistor	2SA1036K
Q	872	Transistor	2SB1132
Q	873	Transistor	DTC124EU
Q	874	Transistor	2SB1132
Q	875	Transistor	DTC124EU
D	111	Diode	1SS133
D	351	Diode	MA152WK
D	601	Diode	MA110
D	801	Diode	1SS133

=====Circuit Symbol and No.		===Part Name	Part No.
D	802	Diode	1SS133
D	851	Diode	MA3082(L)
D	852	Diode	ERA15-02VH
D	853	Diode	ERA15-02VH
D	854	Diode	ERA15-02VH
D	855	Diode	ERA15-02VH
D	856	Diode	ERA15-02VH
D	857	Diode	ERA15-02VH
D	858	Diode	ERA15-02VH
D	859	Diode	MA3062(H)
D	860	Diode	MA3082(L)
ZNR	451	Surge Protector	DSPS-201M-S00B
L	141	Inductor	CTF1306
L	142	Inductor	CTF1306
L	143	Inductor	CTF1306
L	251	Inductor	LCTA101J3225
L	252	Inductor	CTF1379
L	253	Inductor	CTF1305
L	254	Inductor	CTF1379
L	255	Inductor	CTF1379
L	256	Inductor	CTF1379
L	257	Inductor	CTF1379
L	258	Inductor	CTF1379
L	259	Inductor	CTF1379
L	260	Inductor	CTF1379
L	261	Inductor	CTF1379
L	262	Inductor	LCTA471J3225
L	263	Inductor	CTF1379
L	264	Inductor	CTF1379
L	265	Inductor	CTF1379
L	401	Ferri-Inductor	LAU4R7K
L	402	Inductor	LCTA101J3225
L	403	Inductor	CTF1379
L	404	Inductor	LCTA4R7J3225
L	405	Inductor	CTF1379
L	406	Inductor	CTF1379
L	407	Inductor	CTF1379
L	408	Inductor	CTF1379
L	409	Inductor	CTF1379
L	410	Inductor	CTF1379
L	411	Inductor	CTF1379
L	412	Inductor	CTF1379
L	414	Inductor	CTF1379
L	501	Inductor	LCTA101J3225
L	502	Inductor	LCTA101J3225
L	503	Inductor	CTF1379
L	504	Inductor	CTF1379
L	601	Inductor	CTF1379
L	602	Inductor	CTF1379
L	603	Inductor	LCTB4R7K2125
L	604	Inductor	CTF1379
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L	611	Inductor	CTF1379
L	612	Inductor	CTF1379
L	613	Inductor	CTF1379
L	614	Inductor	CTF1379
L	616	Inductor	CTF1379
L	617	Inductor	CTF1379
L	618	Inductor	CTF1379
L	619	Inductor	CTF1379

Circuit Symbol and No.		Part Name	Part No.
L	620	Inductor	CTF1379
L	621	Inductor	CTF1379
L	622	Inductor	CTF1379
L	851	Inductor	CTF1379
L	852	Inductor	CTF1379
L	871	Inductor	CTF1379
L	872	Inductor	CTF1379
L	873	Inductor	CTF1379
L	874	Inductor	CTF1379
L	875	Inductor	CTF1379
L	876	Inductor	CTF1379
L	877	Inductor	CTF1379
L	878	Inductor	CTF1379
L	879	Inductor	CTF1379
L	880	Inductor	CTF1379
L	881	Inductor	CTF1379
L	882	Inductor	CTF1379
TH	601	Thermistor	CCX1037
X	251	Radiator 16.9344MHz	CSS1463
X	501	Crystal Resonator 3.648MHz	CSS1447
X	601	Radiator 6.291456MHz	CSS1505
S	801	Spring Switch(FEJ)	CSN1046
S	802	Spring Switch(FOPN)	CSN1046
S	803	Spring Switch(FCLS)	CSN1046
FU	851	Micro-Fuse 4A	CEK1199
FU	871	Micro-Fuse 800mA	CEK1206
FU	872	Micro-Fuse 200mA	CEK1189
		FM/AM Tuner Unit	CWE1500

RESISTORS

R	111		RS1/16S102J
R	112		RS1/16S102J
R	113		RAB4C222J
R	114		RS1/16S473J
R	115		RS1/16S473J
R	117		RS1/16S681J
R	118		RAB4C222J
R	119		RA3C222J
R	120		RS1/16S473J
R	121		RS1/16S473J
R	122		RS1/16S473J
R	123		RS1/16S473J
R	131		RS1/10S222J
R	132		RS1/10S101J
R	133		RS1/10S101J
R	134		RS1/10S620J
R	141		RS1/16S681J
R	142		RA3C102J
R	143		RS1/16S471J
R	144		RS1/16S471J
R	145		RS1/16S471J
R	151		RS1/16S473J
R	152		RS1/16S473J
R	153		RS1/16S473J
R	154		RS1/16S473J
R	155		RS1/16S392J
R	156		RS1/16S392J
R	157		RS1/16S203J
R	158		RS1/16S203J
R	159		RS1/16S102J
R	160		RS1/16S102J
R	161		RS1/16S223J
R	162		RS1/16S223J
R	163		RS1/16S472J
R	164		RS1/16S472J

Circuit Symbol and No.		Part Name	Part No.
R	165		RS1/16S223J
R	166		RS1/16S223J
R	173		RS1/16S473J
R	174		RS1/16S473J
R	179		RS1/16S472J
R	180		RS1/16S472J
R	181		RS1/16S123J
R	182		RS1/16S123J
R	183		RS1/16S0R0J
R	184		RS1/16S0R0J
R	251		RS1/16S221J
R	252		RS1/16S221J
R	253		RAB4C221J
R	254		RS1/16S225J
R	255		RS1/16S102J
R	256		RS1/16S102J
R	257		RS1/16S221J
R	259		RS1/16S102J
R	263		RS1/16S331J
R	264		RS1/16S473J
R	265		RS1/16S473J
R	266		RS1/16S155J
R	301		RS1/16S103J
R	302		RS1/16S103J
R	303		RS1/16S103J
R	304		RS1/16S103J
R	305		RN1/16SE1202D
R	306		RN1/16SE1202D
R	307		RS1/16S153J
R	308		RS1/16S153J
R	309		RS1/16S273J
R	310		RS1/16S273J
R	311		RS1/16S243J
R	312		RS1/16S243J
R	313		RS1/16S333J
R	314		RS1/16S333J
R	315		RN1/16SE1202D
R	316		RN1/16SE1202D
R	317		RS1/16S153J
R	318		RS1/16S153J
R	319		RS1/16S273J
R	320		RS1/16S273J
R	321		RS1/16S243J
R	322		RS1/16S243J
R	323		RS1/16S333J
R	324		RS1/16S333J
R	325		RN1/16SE1202D
R	326		RN1/16SE1202D
R	327		RS1/16S153J
R	328		RS1/16S153J
R	329		RS1/16S273J
R	330		RS1/16S273J
R	331		RS1/16S243J
R	332		RS1/16S243J
R	333		RS1/16S333J
R	334		RS1/16S333J
R	335		RS1/16S474J
R	336		RS1/16S474J
R	337		RS1/16S474J
R	338		RS1/16S474J
R	339		RS1/16S474J
R	340		RS1/16S474J
R	351		RS1/10S103J
R	352		RS1/10S103J
R	353		RS1/16S103J

=====Circuit Symbol and No.	===Part Name	Part No.
R 354		RS1/10S331J
R 355		RS1/16S103J
R 356		RS1/10S473J
R 357		RS1/16S221J
R 358		RS1/16S221J
R 359		RS1/16S221J
R 401		RS1/16S0R0J
R 402		RS1/16S473J
R 403		RS1/16S473J
R 404		RS1/16S473J
R 405		RS1/16S681J
R 406		RS1/16S103J
R 407		RS1/16S681J
R 408		RS1/16S681J
R 409		RS1/16S681J
R 410		RS1/16S681J
R 411		RS1/16S681J
R 412		RS1/16S681J
R 413		RS1/16S393J
R 414		RS1/16S153J
R 415		RS1/16S162J
R 416		RS1/16S162J
R 417		RS1/16S272J
R 418		RS1/16S272J
R 419		RS1/16S473J
R 420		RS1/16S473J
R 421		RS1/16S472J
R 422		RS1/16S473J
R 425		RS1/16S473J
R 427		RS1/16S224J
R 428		RS1/16S222J
R 429		RS1/16S224J
R 430		RS1/16S224J
R 431		RS1/16S222J
R 432		RS1/16S222J
R 433		RS1/16S222J
R 434		RS1/16S473J
R 435		RS1/16S223J
R 436		RS1/16S223J
R 437		RS1/16S681J
R 438		RS1/16S681J
R 441		RS1/16S102J
R 442		RS1/16S474J
R 447		RS1/16S681J
R 501		RS1/16S102J
R 502		RS1/16S102J
R 503		RS1/16S102J
R 507		RS1/16S0R0J
R 508		RS1/16S0R0J
R 511		RS1/16S102J
R 512		RS1/16S0R0J
R 513		RS1/16S225J
R 518		RS1/16S102J
R 601		RS1/16S473J
R 602		RS1/16S473J
R 603		RS1/16S0R0J
R 604		RS1/8S222J
R 605		RS1/16S0R0J
R 606		RS1/16S0R0J
R 607		RS1/16S472J
R 608		RS1/16S473J
R 609		RS1/16S221J
R 610		RS1/16S0R0J
R 611		RS1/16S221J
R 612		RS1/16S0R0J

=====Circuit Symbol and No.	===Part Name	Part No.
R 613		RS1/16S473J
R 614		RS1/16S222J
R 615		RS1/16S473J
R 616		RS1/16S473J
R 617		RS1/16S473J
R 618		RS1/16S473J
R 619		RS1/16S102J
R 620		RN1/16SE2202D
R 622		RS1/16S222J
R 623		RS1/16S222J
R 624		RS1/16S473J
R 626		RS1/16S102J
R 627		RS1/16S102J
R 628		RS1/16S473J
R 629		RS1/16S473J
R 634		RS1/16S473J
R 635		RS1/16S473J
R 636		RS1/16S473J
R 637		RA3C473J
R 638		RS1/16S102J
R 639		RS1/16S124J
R 640		RS1/16S0R0J
R 641		RS1/16S0R0J
R 643		RS1/16S473J
R 644		RS1/16S472J
R 645		RS1/16S222J
R 646		RS1/16S104J
R 647		RS1/16S104J
R 648		RS1/16S221J
R 649		RS1/16S221J
R 650		RS1/16S473J
R 801		RS1/16S221J
R 802		RS1/16S221J
R 803		RS1/16S221J
R 804		RS1/16S473J
R 805		RS1/16S221J
R 806		RS1/16S473J
R 807		RS1/16S102J
R 808		RS1/16S102J
R 851		RS1/16S103J
R 852		RS1/10S472J
R 853		RS1/16S473J
R 854		RS1/16S224J
R 855		RS1/8S101J
R 856		RS1/10S102J
R 857		RS1/10S223J
R 858		RS1/10S473J
R 859		RS1/10S223J
R 860		RS1/10S103J
R 861		RS1/10S473J
R 862		RS1/10S473J
R 863		RS1/10S472J
R 871		RS1/10S223J
R 872		RS1/10S152J
R 873		RS1/16S102J
R 874		RS1/10S332J
R 875		RS1/10S223J
R 876		RS1/8S222J
R 877		RS1/10S222J
R 888		RS1/16S102J
R 889		RS1/16S102J
R 890		RS1/16S102J
R 891		RS1/16S102J
R 892		RS1/16S102J
R 893		RS1/16S102J

=====Circuit Symbol and No.		===Part Name	Part No.
CAPACITORS			
C	113		CEJA220M16
C	114		CEJA100M16
C	131		CKSRYB104K16
C	141		CKSYB222K50
C	151		CKSYB105K16
C	152		CKSYB105K16
C	153		CKSYB475K10
C	154		CKSYB475K10
C	155		CKSYB475K10
C	156		CKSYB475K10
C	157		CCSRCH101J50
C	158		CCSRCH101J50
C	161		CKSQYB223K25
C	162		CEV100M16
C	163		CEV220M10
C	164		CEV101M10
C	165		CCSRCH681J50
C	166		CCSRCH681J50
C	167		CCSRCH271J50
C	168		CCSRCH271J50
C	169		CEVNP100M16
C	170		CEVNP100M16
C	172		CKSYB475K10
C	179		CEJA100M16
C	184		CEJA100M16
C	251		CKSYB106K6R3
C	252		CKSRYB104K16
C	253		CKSRYB104K16
C	254		CKSRYB104K16
C	255		CKSRYB104K16
C	256		CKSRYB104K16
C	257		CKSRYB104K16
C	258		CKSRYB104K16
C	259		CKSRYB104K16
C	260		CKSRYB104K16
C	261		CKSRYB104K16
C	262		CKSRYB104K16
C	263		CKSRYB104K16
C	264		CKSRYB104K16
C	265		CKSRYB104K16
C	266		CKSRYB104K16
C	267		CKSRYB104K16
C	268		CCSRCH180J50
C	269		CCSRCH180J50
C	270		CKSYB475K10
C	271		CEV101M4
C	273		CKSYB475K10
C	274		CKSRYB102K50
C	275		CKSRYB102K50
C	276		CCSRCH560J50
C	277		CKSRYB103K25
C	278		CKSRYB103K25
C	280		CEV221M4
C	281		CCSRCH101J50
C	282		CKSRYB103K25
C	301		CKSYB105K16
C	302		CKSYB105K16
C	303		CKSYB105K16
C	304		CKSYB105K16
C	305		CKSYB105K16
C	306		CKSYB105K16
C	307		CEJA100M16
C	308		CEJA100M16
C	309		CCSRCH271J50
C	310		CCSRCH271J50

=====Circuit Symbol and No.		===Part Name	Part No.
C	311		CCSRCH121J50
C	312		CCSRCH121J50
C	313		CCSRCH101J50
C	314		CCSRCH101J50
C	315		CKSYB475K10
C	316		CKSYB475K10
C	317		CCSRCH271J50
C	318		CCSRCH271J50
C	319		CCSRCH121J50
C	320		CCSRCH121J50
C	321		CCSRCH101J50
C	322		CCSRCH101J50
C	323		CKSYB475K10
C	324		CKSYB475K10
C	325		CCSRCH271J50
C	326		CCSRCH271J50
C	327		CCSRCH121J50
C	328		CCSRCH121J50
C	329		CCSRCH101J50
C	330		CCSRCH101J50
C	331		CKSYB475K10
C	332		CKSYB475K10
C	333		CKSYB106K6R3
C	334		CKSRYB104K16
C	335		CKSQYB474K16
C	336		CKSQYB474K16
C	337		CKSYB474K16
C	338		CKSYB474K16
C	339		CKSYB474K16
C	340		CKSYB474K16
C	341		CKSQYB474K16
C	342		CKSQYB474K16
C	343		CKSQYB225K10
C	344		CKSQYB225K10
C	345		CKSQYB225K10
C	346		CKSQYB225K10
C	347		CKSQYB225K10
C	348		CKSQYB225K10
C	349		CKSYB475K10
C	350		CKSQYB105K16
C	351		CEJA330M10
C	352		CKSQYB105K16
C	353	4700µF/16V	CCH1302
C	354		CKSYB104K50
C	355		CEV100M16
C	356		CKSYB225K16
C	357		CKSYB225K16
C	401		CKSRYB103K25
C	402		CKSRYB182K50
C	404		CKSRYB473K16
C	405		CEJA101M10
C	406		CKSRYB103K25
C	407		CKSRYB123K25
C	408		CKSRYB123K25
C	409		CKSRYB472K50
C	410		CEJA220M10
C	411		CKSRYB223K25
C	412		CKSRYB223K25
C	413		CKSQYB105K16
C	414		CKSQYB105K16
C	415		CKSQYB472K50
C	417		CKSRYB223K25
C	422		CCSRCH101J50
C	424		CCSRCH101J50
C	425		CKSRYB104K16

=====Circuit Symbol and No.		===Part Name	Part No.
C	429		CKSRYB104K16
C	430		CCSRCH101J50
C	501		CEV220M6R3
C	503		CCSRCH270J50
C	504		CCSRCH270J50
C	505		CKSRYB104K16
C	506		CCSRCH471J50
C	507		CCSRCH471J50
C	508		CKSRYB104K16
C	509		CEV220M6R3
C	512		CKSRYB104K16
C	513		CKSRYB104K16
C	515		CCSRCH101J50
C	602		CCSRCH270J50
C	603		CKSRYB105K6R3
C	604		CCSRCH270J50
C	605		CKSRYB103K25
C	606		CKSRYB103K25
C	607		CKSRYB103K25
C	608		CKSRYB104K16
C	609		CKSYB225K16
C	612		CKSRYB102K50
C	613		CKSRYB103K25
C	614		CKSRYB104K16
C	801		CKSRYB103K25
C	802		CCSRCH101J50
C	803		CCSRCH101J50
C	804		CEJA220M16
C	805		CKSQYB103K25
C	807		CKSRYB103K25
C	808		CCSRCH101J50
C	851	1000µF/16V	CCH1234
C	852		CKSQYB473K50
C	853		CKSRYB104K16
C	854		CKSQYB104K50
C	855		CKSQYB104K16
C	856		CKSQYB104K16
C	857		CKSQYB104K16
C	858		CKSRYB104K16
C	859		CKSRYB104K16
C	861		CKSRYB104K16
C	863		CKSRYB104K16
C	871		CCSQCH221J50
C	872		CCSQCH221J50
C	873		CKSRYB104K16
C	874		CKSRYB104K16
C	877		CKSRYB104K16

A Unit Number : CWM7001(FH-P6600/ES)
Unit Name : Audio Amp Unit

MISCELLANEOUS

IC	151	IC	BA3131FS
IC	153	IC	NJM4558MD
IC	251	IC	PDG255A
IC	252	IC	TC74VHC125FT
IC	253	IC	TC7SET08FU
IC	301	IC	PM0017AM
IC	302	IC	NJM4558MD
IC	303	IC	NJM4558MD
IC	304	IC	NJM4558MD
IC	351	IC	PAL005A
IC	601	IC	PE5122A
IC	602	IC	S-80734ANDYI
IC	801	IC	TC7W14FU
IC	803	Photo-interrupter	GP1S94J
IC	804	Photo-interrupter	GP1S94J

=====Circuit Symbol and No.		===Part Name	Part No.
IC	805	IC	BA6288FS
IC	806	IC	BA09SFP
Q	251	Transistor	IMH1A
Q	351	Transistor	DTC144EK
Q	352	Transistor	DTC144EU
Q	402	Transistor	2SC2412K
Q	851	Transistor	2SC2412K
Q	852	Transistor	2SC2412K
Q	853	Transistor	DTC124EK
Q	854	Transistor	2SA1162
Q	855	Chip Transistor	2SC2712
Q	856	Chip Transistor	2SC2712
Q	871	Transistor	2SA1036K
Q	872	Transistor	2SB1132
Q	873	Transistor	DTC124EU
Q	874	Transistor	2SB1132
Q	875	Transistor	DTC124EU
D	111	Diode	1SS133
D	351	Diode	MA152WK
D	601	Diode	MA110
D	801	Diode	1SS133
D	802	Diode	1SS133
D	851	Diode	MA3082(L)
D	852	Diode	ERA15-02VH
D	853	Diode	ERA15-02VH
D	854	Diode	ERA15-02VH
D	855	Diode	ERA15-02VH
D	856	Diode	ERA15-02VH
D	857	Diode	ERA15-02VH
D	858	Diode	ERA15-02VH
D	859	Diode	MA3062(H)
D	860	Diode	MA3082(L)
ZNR	451	Surge Protector	DSPS-201M-S00B
L	141	Inductor	CTF1306
L	142	Inductor	CTF1306
L	143	Inductor	CTF1306
L	251	Inductor	LCTA101J3225
L	252	Inductor	CTF1379
L	253	Inductor	CTF1305
L	254	Inductor	CTF1379
L	255	Inductor	CTF1379
L	256	Inductor	CTF1379
L	257	Inductor	CTF1379
L	258	Inductor	CTF1379
L	259	Inductor	CTF1379
L	260	Inductor	CTF1379
L	261	Inductor	CTF1379
L	262	Inductor	LCTA471J3225
L	263	Inductor	CTF1379
L	264	Inductor	CTF1379
L	265	Inductor	CTF1379
L	401	Ferri-Inductor	LAU4R7K
L	402	Inductor	LCTA101J3225
L	403	Inductor	CTF1379
L	404	Inductor	LCTA4R7J3225
L	405	Inductor	CTF1379
L	406	Inductor	CTF1379
L	407	Inductor	CTF1379
L	408	Inductor	CTF1379
L	409	Inductor	CTF1379
L	410	Inductor	CTF1379
L	411	Inductor	CTF1379
L	412	Inductor	CTF1379
L	601	Inductor	CTF1379
L	602	Inductor	CTF1379

=====Circuit Symbol and No.		===Part Name	Part No.
L	603	Inductor	LCTB4R7K2125
L	604	Inductor	CTF1379
L	605	Inductor	CTF1379
L	606	Inductor	CTF1379
L	607	Inductor	CTF1379
L	608	Inductor	CTF1379
L	609	Inductor	CTF1379
L	610	Inductor	CTF1379
L	611	Inductor	CTF1379
L	612	Inductor	CTF1379
L	613	Inductor	CTF1379
L	614	Inductor	CTF1379
L	616	Inductor	CTF1379
L	617	Inductor	CTF1379
L	618	Inductor	CTF1379
L	619	Inductor	CTF1379
L	620	Inductor	CTF1379
L	621	Inductor	CTF1379
L	622	Inductor	CTF1379
L	851	Inductor	CTF1379
L	852	Inductor	CTF1379
L	871	Inductor	CTF1379
L	872	Inductor	CTF1379
L	873	Inductor	CTF1379
L	874	Inductor	CTF1379
L	875	Inductor	CTF1379
L	876	Inductor	CTF1379
L	877	Inductor	CTF1379
L	878	Inductor	CTF1379
L	879	Inductor	CTF1379
L	880	Inductor	CTF1379
L	881	Inductor	CTF1379
L	882	Inductor	CTF1379
TH	601	Thermistor	CCX1037
X	251	Radiator 16.9344MHz	CSS1463
X	601	Radiator 6.291456MHz	CSS1505
S	801	Spring Switch(FEJ)	CSN1046
S	802	Spring Switch(FOPN)	CSN1046
S	803	Spring Switch(FOLS)	CSN1046
FU	851	Micro-Fuse 4A	CEK1199
FU	871	Micro-Fuse 800mA	CEK1206
FU	872	Micro-Fuse 200mA	CEK1189
		FM/AM Tuner Unit	CWE1501

RESISTORS

=====Circuit Symbol and No.		===Part Name	Part No.
R	111		RS1/16S102J
R	112		RS1/16S102J
R	113		RAB4C222J
R	114		RS1/16S473J
R	115		RS1/16S473J
R	117		RS1/16S681J
R	118		RAB4C222J
R	119		RA3C222J
R	120		RS1/16S473J
R	121		RS1/16S473J
R	122		RS1/16S473J
R	123		RS1/16S473J
R	131		RS1/10S222J
R	132		RS1/10S101J
R	133		RS1/10S101J
R	134		RS1/10S620J
R	141		RS1/16S681J
R	142		RA3C102J
R	143		RS1/16S471J
R	144		RS1/16S471J
R	145		RS1/16S471J
R	151		RS1/16S473J
R	152		RS1/16S473J
R	153		RS1/16S473J
R	154		RS1/16S473J
R	155		RS1/16S392J
R	156		RS1/16S392J
R	157		RS1/16S203J
R	158		RS1/16S203J
R	159		RS1/16S102J
R	160		RS1/16S102J
R	161		RS1/16S223J
R	162		RS1/16S223J
R	163		RS1/16S472J
R	164		RS1/16S472J
R	165		RS1/16S223J
R	166		RS1/16S223J
R	173		RS1/16S473J
R	174		RS1/16S473J
R	179		RS1/16S472J
R	180		RS1/16S472J
R	181		RS1/16S123J
R	182		RS1/16S123J
R	183		RS1/16S0R0J
R	184		RS1/16S0R0J
R	251		RS1/16S221J
R	252		RS1/16S221J
R	253		RAB4C221J
R	254		RS1/16S225J
R	255		RS1/16S102J
R	256		RS1/16S102J
R	257		RS1/16S221J
R	259		RS1/16S102J
R	263		RS1/16S331J
R	264		RS1/16S473J
R	265		RS1/16S473J
R	266		RS1/16S155J
R	301		RS1/16S103J
R	302		RS1/16S103J
R	303		RS1/16S103J
R	304		RS1/16S103J
R	305		RN1/16SE1202D
R	306		RN1/16SE1202D
R	307		RS1/16S153J
R	308		RS1/16S153J
R	309		RS1/16S273J
R	310		RS1/16S273J
R	311		RS1/16S243J
R	312		RS1/16S243J
R	313		RS1/16S333J
R	314		RS1/16S333J
R	315		RN1/16SE1202D
R	316		RN1/16SE1202D
R	317		RS1/16S153J
R	318		RS1/16S153J
R	319		RS1/16S273J
R	320		RS1/16S273J
R	321		RS1/16S243J
R	322		RS1/16S243J
R	323		RS1/16S333J
R	324		RS1/16S333J
R	325		RN1/16SE1202D
R	326		RN1/16SE1202D
R	327		RS1/16S153J
R	328		RS1/16S153J

=====Circuit Symbol and No.		===Part Name	Part No.
R	329		RS1/16S273J
R	330		RS1/16S273J
R	331		RS1/16S243J
R	332		RS1/16S243J
R	333		RS1/16S333J
R	334		RS1/16S333J
R	335		RS1/16S474J
R	336		RS1/16S474J
R	337		RS1/16S474J
R	338		RS1/16S474J
R	339		RS1/16S474J
R	340		RS1/16S474J
R	351		RS1/10S103J
R	352		RS1/10S103J
R	353		RS1/16S103J
R	354		RS1/10S331J
R	355		RS1/16S103J
R	356		RS1/10S473J
R	357		RS1/16S221J
R	358		RS1/16S221J
R	359		RS1/16S221J
R	401		RS1/16S0R0J
R	403		RS1/16S473J
R	404		RS1/16S473J
R	405		RS1/16S681J
R	406		RS1/16S103J
R	407		RS1/16S681J
R	408		RS1/16S681J
R	409		RS1/16S681J
R	410		RS1/16S681J
R	411		RS1/16S681J
R	413		RS1/16S393J
R	415		RS1/16S272J
R	416		RS1/16S272J
R	417		RS1/16S162J
R	418		RS1/16S162J
R	419		RS1/16S473J
R	420		RS1/16S473J
R	421		RS1/16S472J
R	422		RS1/16S473J
R	423		RS1/16S0R0J
R	424		RS1/16S0R0J
R	425		RS1/16S473J
R	428		RS1/16S222J
R	433		RS1/16S222J
R	440		RS1/16S0R0J
R	601		RS1/16S473J
R	602		RS1/16S473J
R	603		RS1/16S0R0J
R	604		RS1/8S222J
R	605		RS1/16S0R0J
R	606		RS1/16S0R0J
R	607		RS1/16S472J
R	608		RS1/16S473J
R	609		RS1/16S221J
R	610		RS1/16S0R0J
R	611		RS1/16S221J
R	612		RS1/16S0R0J
R	613		RS1/16S473J
R	614		RS1/16S222J
R	615		RS1/16S473J
R	616		RS1/16S473J
R	617		RS1/16S473J
R	618		RS1/16S473J
R	619		RS1/16S102J

=====Circuit Symbol and No.		===Part Name	Part No.
R	620		RN1/16SE2202D
R	622		RS1/16S222J
R	623		RS1/16S222J
R	624		RS1/16S473J
R	625		RS1/16S473J
R	626		RS1/16S102J
R	627		RS1/16S102J
R	628		RS1/16S473J
R	629		RS1/16S473J
R	632		RS1/16S0R0J
R	633		RS1/16S0R0J
R	634		RS1/16S473J
R	635		RS1/16S473J
R	636		RS1/16S473J
R	637		RA3C473J
R	638		RS1/16S102J
R	639		RS1/16S124J
R	640		RS1/16S0R0J
R	641		RS1/16S0R0J
R	643		RS1/16S473J
R	644		RS1/16S472J
R	645		RS1/16S222J
R	646		RS1/16S104J
R	647		RS1/16S104J
R	648		RS1/16S221J
R	649		RS1/16S221J
R	650		RS1/16S473J
R	801		RS1/16S221J
R	802		RS1/16S221J
R	803		RS1/16S221J
R	804		RS1/16S473J
R	805		RS1/16S221J
R	806		RS1/16S473J
R	807		RS1/16S102J
R	808		RS1/16S102J
R	851		RS1/16S103J
R	852		RS1/10S472J
R	853		RS1/16S473J
R	854		RS1/16S224J
R	855		RS1/8S101J
R	856		RS1/10S102J
R	857		RS1/10S223J
R	858		RS1/10S473J
R	859		RS1/10S223J
R	860		RS1/10S103J
R	861		RS1/10S473J
R	862		RS1/10S473J
R	863		RS1/10S472J
R	871		RS1/10S223J
R	872		RS1/10S152J
R	873		RS1/16S102J
R	874		RS1/10S332J
R	875		RS1/10S223J
R	876		RS1/8S222J
R	877		RS1/10S222J
R	888		RS1/16S102J
R	889		RS1/16S102J
R	890		RS1/16S102J
R	891		RS1/16S102J
R	892		RS1/16S102J
R	893		RS1/16S102J

CAPACITORS

C	111		CKSRYB104K16
C	113		CEJA220M16
C	114		CEJA100M16
C	131		CKSRYB104K16
C	151		CKSYB105K10

Circuit Symbol and No.	Part Name	Part No.
C 152		CKSYB105K10
C 153		CKSYB475K10
C 154		CKSYB475K10
C 155		CKSYB475K10
C 156		CKSYB475K10
C 157		CCSRCH101J50
C 158		CCSRCH101J50
C 161		CKSQYB223K25
C 162		CEV100M16
C 163		CEV220M10
C 164		CEV101M10
C 165		CCSRCH681J50
C 166		CCSRCH681J50
C 167		CCSRCH271J50
C 168		CCSRCH271J50
C 169		CEVNP100M16
C 170		CEVNP100M16
C 172		CKSYB475K10
C 179		CEJA100M16
C 184		CEJA100M16
C 251		CKSYB106K6R3
C 252		CKSRYB104K16
C 253		CKSRYB104K16
C 254		CKSRYB104K16
C 255		CKSRYB104K16
C 256		CKSRYB104K16
C 257		CKSRYB104K16
C 258		CKSRYB104K16
C 259		CKSRYB104K16
C 260		CKSRYB104K16
C 261		CKSRYB104K16
C 262		CKSRYB104K16
C 263		CKSRYB104K16
C 264		CKSRYB104K16
C 265		CKSRYB104K16
C 266		CKSRYB104K16
C 267		CKSRYB104K16
C 268		CCSRCH180J50
C 269		CCSRCH180J50
C 270		CKSYB475K10
C 271		CEV101M4
C 272		CKSRYB102K50
C 273		CKSYB475K10
C 274		CKSRYB102K50
C 276		CCSRCH560J50
C 277		CKSRYB103K25
C 278		CKSRYB103K25
C 280		CEV221M4
C 281		CCSRCH101J50
C 301		CKSYB105K16
C 302		CKSYB105K16
C 303		CKSYB105K16
C 304		CKSYB105K16
C 305		CKSYB105K16
C 306		CKSYB105K16
C 307		CEJA100M16
C 308		CEJA100M16
C 309		CCSRCH271J50
C 310		CCSRCH271J50
C 311		CCSRCH121J50
C 312		CCSRCH121J50
C 313		CCSRCH101J50
C 314		CCSRCH101J50
C 315		CKSYB475K10
C 316		CKSYB475K10
C 317		CCSRCH271J50
C 318		CCSRCH271J50
C 319		CCSRCH121J50
C 320		CCSRCH121J50
C 321		CCSRCH101J50
C 322		CCSRCH101J50
C 323		CKSYB475K10
C 324		CKSYB475K10
C 325		CCSRCH271J50
C 326		CCSRCH271J50
C 327		CCSRCH121J50
C 328		CCSRCH121J50
C 329		CCSRCH101J50
C 330		CCSRCH101J50
C 331		CKSYB475K10
C 332		CKSYB475K10
C 333		CKSYB106K6R3
C 334		CKSRYB104K16
C 335		CKSQYB474K16
C 336		CKSQYB474K16
C 337		CKSYB474K16
C 338		CKSYB474K16
C 339		CKSYB474K16
C 340		CKSYB474K16
C 341		CKSQYB474K16
C 342		CKSQYB474K16
C 343		CKSQYB225K10
C 344		CKSQYB225K10
C 345		CKSQYB225K10
C 346		CKSQYB225K10
C 347		CKSQYB225K10
C 348		CKSQYB225K10
C 349		CKSYB475K10
C 350		CKSQYB105K16
C 351		CEJA330M10
C 352		CKSQYB105K16
C 353	4700µF/16V	CCH1302
C 354		CKSYB104K50
C 355		CEV100M16
C 356		CKSYB225K16
C 357		CKSYB225K16
C 401		CKSRYB103K25
C 402		CCSRCH101J50
C 404		CKSRYB473K16
C 405		CEJA101M10
C 406		CKSRYB103K25
C 407		CKSRYB183K25
C 408		CKSRYB183K25
C 409		CKSRYB472K50
C 410		CEJA220M10
C 411		CKSRYB223K25
C 412		CKSRYB223K25
C 422		CCSRCH101J50
C 423		CCSRCH101J50
C 429		CKSRYB104K16
C 602		CCSRCH270J50
C 603		CKSRYB105K6R3
C 604		CCSRCH270J50
C 605		CKSRYB103K25
C 606		CKSRYB103K25
C 607		CKSRYB103K25
C 608		CKSRYB104K16
C 609		CKSYB225K16
C 612		CKSRYB102K50
C 613		CKSRYB103K25

=====Circuit Symbol and No.		===Part Name	Part No.
C	614		CKSRYB104K16
C	615		CKSRYB222K50
C	801		CKSRYB103K25
C	802		CCSRCH101J50
C	803		CCSRCH101J50
C	804		CEJA220M16
C	805		CKSQYB103K25
C	807		CKSRYB103K25
C	808		CCSRCH101J50
C	851	1000µF/16V	CCH1234
C	852		CKSQYB473K50
C	853		CKSRYB104K16
C	854		CKSQYB104K50
C	855		CKSQYB104K16
C	856		CKSQYB104K16
C	857		CKSQYB104K16
C	858		CKSRYB104K16
C	861		CKSRYB104K16
C	871		CCSQCH221J50
C	872		CCSQCH221J50
C	873		CKSRYB104K16
C	874		CKSRYB104K16

C Unit Number : CWM7007(FH-P6600R/EW)
: CWM7002(FH-P6600/ES)
Unit Name : Power Supply Unit

MISCELLANEOUS

IC	902	IC	S-81250SGUP
IC	903	IC	BA033T
IC	904	IC	CA0008AM
IC	905	IC	TA2050F
IC	906	IC(FH-P6600/ES)	TPD1018F
IC	907	IC	PQ20RX1S-L
Q	912	Transistor	2SD2396
Q	913	Transistor	2SA1797
Q	914	Transistor	DTC114EK
Q	915	Transistor	2SD2396
Q	916	Transistor	DTA114EK
Q	917	Transistor	DTC114EK
Q	921	Transistor	2SD2396
Q	922	Transistor	DTA114EK
Q	923	Transistor	DTC124EK
Q	925	Transistor	DTC114EK
Q	926	Transistor	2SB1132
Q	927	Transistor	DTA114EK
Q	931	Transistor	DTC114EK
Q	932	Transistor	2SA1037K
Q	933	Transistor	DTC114EU
Q	935	Transistor	2SA1162
Q	936	Transistor	2SC2412K
Q	937	Transistor	FMG12
Q	938	Transistor	FMG12
D	902	Diode	HZS9L(C1)
D	903	Diode	HZS9L(B1)
D	905	Diode	ERA15-02VH
D	906	Diode	HZS6L(C3)
D	908	Diode	HZS16L(1)
D	913	Diode	MA152WK
D	915	Diode	1SS355
D	917	Diode	1SS355
D	918	Diode	1SS355
D	919	Diode	1SS355

=====Circuit Symbol and No.		===Part Name	Part No.
D	920	Diode	1SS355
L	901	Inductor	CTF1420
L	902	Inductor	CTF1420
L	903	Inductor	CTF1420
L	904	Inductor	CTF1420
L	905	Inductor	CTF1420
L	907	Chip-Inductor	LCTA2R2J3225
L	908	Inductor	LCTB2R2K2125
L	909	Inductor	LCTB2R2K2125
L	910	Inductor	LCTA101J3225
BZ	901	Buzzer	CPV1012

RESISTORS

R	901		RS1/10S821J
R	902		RS1/10S821J
R	903		RS1/10S821J
R	904		RS1/10S821J
R	909		RS1/10S103J
R	910		RS1/10S103J
R	911		RS1/10S103J
R	912		RS1/10S103J
R	914		RS1/8S751J
R	915		RS1/10S222J
R	916		RS1/4S122J
R	917		RS1/4S361J
R	919		RS1/10S103J
R	920		RS1/8S122J
R	921		RS1/10S102J
R	922		RS1/8S181J
R	923		RS1/4S122J
R	924		RS1/10S561J
R	928		RS1/10S102J
R	929		RS1/10S223J
R	930		RS1/10S181J
R	931		RS1/10S102J
R	932		RS1/10S223J
R	933		RS1/10S181J
R	934		RS1/16S102J
R	935		RS1/10S102J
R	936		RS1/16S473J
R	937		RS1/16S473J
R	938		RS1/10S682J
R	939		RS1/10S332J
R	940		RS1/10S102J
R	941		RS1/10S102J
R	942	(FH-P6600/ES)	RS1/10S102J
R	948		RS1/10S183J
R	949		RS1/10S472J
R	950		RS1/10S472J
R	951		RS1/10S102J
R	952		RS1/8S103J
R	953		RS1/10S223J
R	955		RS1/16S103J
R	956		RS1/10S0R0J
R	959		RS1/10S362J
R	960		RS1/10S202J
R	961		RS1/10S0R0J

CAPACITORS

C	903	CKSQYB102K50
C	904	CKSQYB102K50
C	905	CKSQYB102K50
C	906	CKSQYB102K50
C	910	CKSQYB103K25

=====Circuit Symbol and No.		===Part Name	Part No.
C	911		CEAL101M10
C	912		CKSQYB473K16
C	913		CEAL101M10
C	914		CKSYB225K16
C	915		CEAL100M16
C	916	330µF/10V	CCH1181
C	917		CKSQYB103K25
C	918	0.1µF/5.5V	CCL1050
C	919		CEAL470M6R3
C	920		CKSQYB103K25
C	921		CKSQYB103K25
C	923	220µF/16V	CCH1180
C	924		CCSRCH101J50
C	925		CKSYB106K6R3
C	926		CKSYB225K16
C	930		CKSQYB105K16
C	931		CKSQYB105K16
C	932		CEAL100M16
C	933		CKSQYB105K16
C	934		CKSQYB105K16
C	936		CKSRYB472K50
C	937		CKSRYB103K16
C	938	(FH-P6600/ES)	CKSYB225K16
C	940		CEAL100M16
C	943		CKSQYB103K25
C	945		CKSYB475K10
C	946		CKSYB475K10
C	947		CKSYB475K10
C	948		CKSYB475K10
C	949		CKSQYB103K25
C	950		CEAL100M16
C	951	(FH-P6600/ES)	CKSQYB473K16
C	953		CKSYB475K10
C	954		CKSQYB225K10

Flap PCB Unit
Consists of
Flap PCB
LED PCB

DE Unit Number:CWM7009(FH-P6600R/EW)
Unit Name :Flap PCB Unit

MISCELLANEOUS

IC	1901	IC	SED1526F0A
IC	1903	IC	SBX8035-H
IC	1904	IC	M62361FP
IC	1905	IC	PE5149A
Q	1919	Transistor	DTA114EU
Q	1920	Transistor	DTC114EU
Q	1921	Transistor	IMX1
Q	1922	Transistor	IMX1
Q	1923	Transistor	IMX1
Q	1924	Transistor	IMX1
Q	1925	Transistor	IMX1
Q	1926	Transistor	IMX1
Q	1927	Transistor	IMX1
Q	1928	Transistor	IMX1
Q	1929	Transistor	IMX1
Q	1930	Transistor	DTA124EU
D	1201	LED	NSCM315C
D	1202	LED	NSCM315C
D	1203	LED	NSCM315C
D	1204	LED	NSCM315C

=====Circuit Symbol and No.		===Part Name	Part No.
D	1901	LED	CL170SRCD
D	1902	LED	CL170UBX
D	1903	LED	CL170UBX
D	1904	LED	CL170SRCD
D	1905	LED	CL170SRCD
D	1906	LED	CL170SRCD
D	1907	Diode	MA111
D	1908	Diode	MA111
D	1909	Diode	MA111
D	1910	Diode	MA111
D	1911	Diode	MA111
D	1912	Diode	MA111
D	1913	Diode	MA111
D	1914	Diode	MA111
D	1915	Diode	MA111
D	1916	Diode	MA111
D	1917	Diode	MA111
D	1918	Diode	MA111
D	1919	Diode	UDZ7R5(B)
D	1922	LED	CL170SRCD
D	1923	LED	CL170SRCD
L	1901	Coil	LCTB150K3216
L	1902	Inductor	LCTB2R2K2125
L	1903	Inductor	LCTB2R2K2125
X	1901	Ceramic Resonator 4.72MHz	CSS1430
S	1901	Push Switch	CSG1135
S	1902	Push Switch	CSG1135
S	1908	Push Switch	CSG1135
S	1909	Push Switch	CSG1135
S	1910	Push Switch	CSG1135
S	1911	Push Switch	CSG1135
S	1912	Push Switch	CSG1135
S	1915	Push Switch	CSG1135
S	1917	Push Switch	CSG1135
S	1926	Push Switch	CSG1135
S	1927	Push Switch	CSG1135
S	1928	Push Switch	CSG1135
S	1929	Push Switch	CSG1135
S	1930	Push Switch	CSG1135
S	1931	Push Switch	CSG1135
S	1932	Push Switch	CSG1135
S	1939	Push Switch	CSG1111
S	1940	Push Switch	CSG1111
S	1941	Push Switch	CSG1111
S	1942	Push Switch	CSG1111
S	1943	Push Switch	CSG1111
S	1944	Push Switch	CSG1111
S	1945	Push Switch	CSG1111
S	1946	Push Switch	CSG1135
S	1947	Switch	CSG1041
S	1948	Switch	CSG1041
S	1949	Switch	CSG1041
S	1950	Switch	CSG1041
VR	1901	Semi-fixed 330kΩ(B)	CCP1028
EF	1901	EMI Filter	CCG1078
LCD	1901	LCD	CAW1593

RESISTORS

R	1004	RS1/16S102J
R	1005	RAB4C102J
R	1007	RS1/16S473J
R	1008	RS1/16S102J
R	1009	RS1/16S474J
R	1010	RS1/16S102J
R	1011	RS1/16S473J
R	1012	RS1/16S473J
R	1013	RS1/16S102J
R	1014	RS1/16S102J

=====Circuit Symbol and No.	===Part Name	Part No.
R 1015		RAB4C471J
R 1018		RS1/16S102J
R 1019		RS1/16S102J
R 1901		RS1/16S821J
R 1902		RS1/16S821J
R 1903		RS1/16S821J
R 1904		RS1/16S821J
R 1905		RS1/16S821J
R 1906		RS1/16S122J
R 1907		RS1/16S122J
R 1908		RS1/16S122J
R 1909		RS1/16S122J
R 1911		RS1/16S182J
R 1912		RS1/16S182J
R 1913		RS1/16S182J
R 1914		RS1/16S182J
R 1916		RS1/16S622J
R 1917		RS1/16S302J
R 1918		RS1/16S302J
R 1919		RS1/16S302J
R 1920		RS1/16S223J
R 1921		RS1/16S302J
R 1922		RS1/16S622J
R 1923		RS1/16S622J
R 1924		RS1/16S223J
R 1925		RS1/16S622J
R 1926		RS1/16S223J
R 1927		RS1/10S223J
R 1928		RS1/16S472J
R 1929		RS1/16S472J
R 1930		RS1/16S472J
R 1931		RS1/16S472J
R 1932		RS1/16S472J
R 1933		RS1/16S824J
R 1934		RS1/16S684J
R 1935		RS1/16S471J
R 1936		RS1/16S471J
R 1937		RS1/16S471J
R 1938		RS1/16S471J
R 1941		RS1/8S751J
R 1942		RS1/8S471J
R 1943		RS1/8S471J
R 1944		RS1/8S471J
R 1945		RS1/8S471J
R 1946		RS1/8S471J
R 1947		RS1/8S751J
R 1948		RS1/8S471J
R 1949		RS1/8S471J
R 1950		RS1/8S471J
R 1951		RS1/8S471J
R 1952		RS1/8S471J
R 1953		RS1/8S471J
R 1954		RS1/8S471J
R 1955		RS1/8S331J
R 1956		RS1/8S331J
R 1957		RS1/8S331J
R 1958		RS1/8S331J
R 1959		RS1/8S331J
R 1960		RS1/8S331J
R 1961		RS1/8S621J
R 1962		RS1/8S621J
R 1963		RS1/10S241J
R 1964		RS1/10S241J
R 1965		RS1/10S151J
R 1966		RS1/10S241J

=====Circuit Symbol and No.	===Part Name	Part No.
R 1967		RS1/10S241J
R 1968		RS1/10S241J
R 1969		RS1/10S151J
R 1970		RS1/10S241J
R 1971		RS1/10S151J
R 1972		RS1/10S241J
R 1973		RS1/10S151J
R 1974		RS1/10S241J
R 1975		RS1/10S101J
R 1976		RS1/10S101J
R 1977		RS1/10S101J
R 1978		RS1/10S101J
R 1979		RS1/10S101J
R 1980		RS1/10S101J
R 1981		RS1/10S101J
R 1982		RS1/10S101J
R 1983		RS1/10S101J
R 1984		RS1/10S101J
R 1985		RS1/10S101J
R 1986		RS1/10S101J
R 1987		RS1/10S104J
R 1988		RS1/10S104J
R 1989		RS1/10S104J
R 1990		RS1/10S222J
R 1991		RS1/10S222J
R 1992		RS1/10S222J
R 1993		RS1/10S102J
R 1994		RS1/10S102J
R 1995		RS1/10S102J
R 1996		RS1/16S102J
R 1997		RS1/16S102J
R 1998		RS1/16S102J
R 1999		RS1/16S101J
R 2004		RS1/16S102J
R 2005		RS1/16S102J
R 2006		RS1/16S102J
R 2007		RS1/16S102J
R 2008		RS1/16S102J
R 2009		RS1/16S102J
R 2010		RS1/16S102J
R 2011		RS1/16S102J
R 2012		RS1/8S471J
R 2013		RS1/8S751J
R 2014		RS1/8S471J
R 2015		RS1/8S751J

CAPACITORS

C 1201		CKSQYB104K16
C 1202		CKSQYB104K16
C 1203		CKSQYB104K16
C 1204		CKSQYB104K16
C 1205		CKSQYB104K16
C 1206		CKSQYB104K16
C 1207		CKSQYB104K16
C 1208		CKSQYB104K16
C 1901		CKSQYB103K25
C 1902		CKSQYB103K25
C 1903		CKSQYB103K25
C 1904		CKSQYB103K25
C 1905		CKSQYB103K25
C 1906		CKSQYB105K16
C 1907		CKSQYB105K16
C 1908		CKSQYB105K16
C 1909		CKSQYB105K16
C 1910		CKSQYB105K16
C 1911		CKSQYB105K16
C 1912		CKSQYB105K16

=====Circuit Symbol and No.	Part Name	Part No.
C 1913		CKSQYB104K16
C 1914		CKSQYB104K16
C 1915		CKSYB225K16
C 1916		CKSQYB104K16
C 1918		CKSQYB104K16
C 1919		CKSQYB104K16
C 1929		CKSQYB104K16
C 1930		CKSYB475K10
C 1931		CKSYB475K10
C 1932		CKSYB475K10
C 1933		CKSYB225K16
C 1951		CKSQYB102K50
C 1952		CKSYB106K6R3
C 1953		CKSQYB103K25
C 1954		CKSQYB103K25
C 1955		CKSRYB102K50
C 1958		CKSRYB102K50

Flap PCB Unit
Consists of
Flap PCB
LED PCB

D E Unit Number:CWM7004(FH-P6600/ES)
Unit Name :Flap PCB Unit

MISCELLANEOUS

IC	1901	IC	SED1526F0A
IC	1903	IC	SBX8035-H
IC	1904	IC	M62361FP
IC	1905	IC	PE5149A
Q	1919	Transistor	DTA114EU
Q	1920	Transistor	DTC114EU
Q	1921	Transistor	IMX1
Q	1922	Transistor	IMX1
Q	1923	Transistor	IMX1
Q	1924	Transistor	IMX1
Q	1925	Transistor	IMX1
Q	1926	Transistor	IMX1
Q	1927	Transistor	IMX1
Q	1928	Transistor	IMX1
Q	1929	Transistor	IMX1
Q	1930	Transistor	DTA124EU
D	1201	LED	NSCM315C
D	1202	LED	NSCM315C
D	1203	LED	NSCM315C
D	1204	LED	NSCM315C
D	1901	LED	CL170PGCD(AB)
D	1902	LED	CL170UBX
D	1903	LED	CL170UBX
D	1904	LED	CL170PGCD(AB)
D	1905	LED	CL170PGCD
D	1906	LED	CL170PGCD
D	1907	Diode	MA111
D	1908	Diode	MA111
D	1909	Diode	MA111
D	1910	Diode	MA111
D	1911	Diode	MA111
D	1912	Diode	MA111
D	1913	Diode	MA111
D	1914	Diode	MA111
D	1915	Diode	MA111
D	1916	Diode	MA111
D	1917	Diode	MA111
D	1918	Diode	MA111
D	1919	Diode	UDZ7R5(B)
D	1922	LED	CL170PGCD(AB)

=====Circuit Symbol and No.	Part Name	Part No.
D 1923	LED	CL170PGCD(AB)
L 1901	Coil	LCTB150K3216
L 1902	Inductor	LCTB2R2K2125
L 1903	Inductor	LCTB2R2K2125
X 1901	Ceramic Resonator 4.72MHz	CSS1430
S 1901	Push Switch	CSG1112
S 1902	Push Switch	CSG1112
S 1908	Push Switch	CSG1129
S 1909	Push Switch	CSG1129
S 1910	Push Switch	CSG1129
S 1911	Push Switch	CSG1129
S 1912	Push Switch	CSG1129
S 1915	Push Switch	CSG1129
S 1917	Push Switch	CSG1129
S 1926	Push Switch	CSG1129
S 1927	Push Switch	CSG1129
S 1928	Push Switch	CSG1129
S 1929	Push Switch	CSG1129
S 1930	Push Switch	CSG1129
S 1931	Push Switch	CSG1129
S 1932	Push Switch	CSG1129
S 1939	Push Switch	CSG1111
S 1940	Push Switch	CSG1111
S 1941	Push Switch	CSG1111
S 1942	Push Switch	CSG1111
S 1943	Push Switch	CSG1111
S 1944	Push Switch	CSG1111
S 1945	Push Switch	CSG1111
S 1946	Push Switch	CSG1129
S 1947	Switch	CSG1041
S 1948	Switch	CSG1041
S 1949	Switch	CSG1041
S 1950	Switch	CSG1041
VR 1901	Semi-fixed 330kΩ(B)	CCP1028
EF 1901	EMI Filter	CCG1078
LCD1901	LCD	CAW1593

RESISTORS

R	1004	RS1/16S102J
R	1005	RAB4C102J
R	1007	RS1/16S473J
R	1008	RS1/16S102J
R	1009	RS1/16S474J
R	1010	RS1/16S102J
R	1011	RS1/16S473J
R	1012	RS1/16S473J
R	1013	RS1/16S102J
R	1014	RS1/16S102J
R	1015	RAB4C471J
R	1018	RS1/16S102J
R	1019	RS1/16S102J
R	1901	RS1/16S821J
R	1902	RS1/16S821J
R	1903	RS1/16S821J
R	1904	RS1/16S821J
R	1905	RS1/16S821J
R	1906	RS1/16S122J
R	1907	RS1/16S122J
R	1908	RS1/16S122J
R	1909	RS1/16S122J
R	1911	RS1/16S182J
R	1912	RS1/16S182J
R	1913	RS1/16S182J
R	1914	RS1/16S182J
R	1916	RS1/16S622J
R	1917	RS1/16S302J
R	1918	RS1/16S302J
R	1919	RS1/16S302J

=====Circuit Symbol and No.	===Part Name	Part No.
R 1920		RS1/16S223J
R 1921		RS1/16S302J
R 1922		RS1/16S622J
R 1923		RS1/16S622J
R 1924		RS1/16S223J
R 1925		RS1/16S622J
R 1926		RS1/16S223J
R 1927		RS1/10S223J
R 1928		RS1/16S472J
R 1929		RS1/16S472J
R 1930		RS1/16S472J
R 1931		RS1/16S472J
R 1932		RS1/16S472J
R 1933		RS1/16S824J
R 1934		RS1/16S684J
R 1935		RS1/16S471J
R 1936		RS1/16S471J
R 1937		RS1/16S471J
R 1938		RS1/16S471J
R 1941		RS1/8S331J
R 1942		RS1/8S471J
R 1943		RS1/8S471J
R 1944		RS1/8S471J
R 1945		RS1/8S471J
R 1946		RS1/8S471J
R 1947		RS1/8S331J
R 1948		RS1/8S471J
R 1949		RS1/8S221J
R 1950		RS1/8S221J
R 1951		RS1/8S221J
R 1952		RS1/8S221J
R 1953		RS1/8S221J
R 1954		RS1/8S221J
R 1955		RS1/8S331J
R 1956		RS1/8S331J
R 1957		RS1/8S331J
R 1958		RS1/8S331J
R 1959		RS1/8S331J
R 1960		RS1/8S331J
R 1961		RS1/8S471J
R 1962		RS1/8S331J
R 1963		RS1/10S241J
R 1964		RS1/10S241J
R 1965		RS1/10S151J
R 1966		RS1/10S241J
R 1967		RS1/10S241J
R 1968		RS1/10S241J
R 1969		RS1/10S151J
R 1970		RS1/10S241J
R 1971		RS1/10S151J
R 1972		RS1/10S241J
R 1973		RS1/10S151J
R 1974		RS1/10S241J
R 1975		RS1/10S101J
R 1976		RS1/10S101J
R 1977		RS1/10S101J
R 1978		RS1/10S101J
R 1979		RS1/10S101J
R 1980		RS1/10S101J
R 1981		RS1/10S101J
R 1982		RS1/10S101J
R 1983		RS1/10S101J
R 1984		RS1/10S101J
R 1985		RS1/10S101J
R 1986		RS1/10S101J

=====Circuit Symbol and No.	===Part Name	Part No.
R 1987		RS1/10S104J
R 1988		RS1/10S104J
R 1989		RS1/10S104J
R 1990		RS1/10S222J
R 1991		RS1/10S222J
R 1992		RS1/10S222J
R 1993		RS1/10S102J
R 1994		RS1/10S102J
R 1995		RS1/10S102J
R 1996		RS1/16S102J
R 1997		RS1/16S102J
R 1998		RS1/16S102J
R 1999		RS1/16S101J
R 2004		RS1/16S102J
R 2005		RS1/16S102J
R 2006		RS1/16S102J
R 2007		RS1/16S102J
R 2008		RS1/16S102J
R 2009		RS1/16S102J
R 2010		RS1/16S102J
R 2011		RS1/16S102J
R 2012		RS1/8S471J
R 2013		RS1/8S331J
R 2014		RS1/8S471J
R 2015		RS1/8S331J

CAPACITORS

C 1201		CKSQYB104K16
C 1202		CKSQYB104K16
C 1203		CKSQYB104K16
C 1204		CKSQYB104K16
C 1205		CKSQYB104K16
C 1206		CKSQYB104K16
C 1207		CKSQYB104K16
C 1208		CKSQYB104K16
C 1901		CKSQYB103K25
C 1902		CKSQYB103K25
C 1903		CKSQYB103K25
C 1904		CKSQYB103K25
C 1905		CKSQYB103K25
C 1906		CKSQYB105K16
C 1907		CKSQYB105K16
C 1908		CKSQYB105K16
C 1909		CKSQYB105K16
C 1910		CKSQYB105K16
C 1911		CKSQYB105K16
C 1912		CKSQYB105K16
C 1913		CKSQYB104K16
C 1914		CKSQYB104K16
C 1915		CKSYB225K16
C 1916		CKSQYB104K16
C 1918		CKSQYB104K16
C 1919		CKSQYB104K16
C 1929		CKSQYB104K16
C 1930		CKSYB475K10
C 1931		CKSYB475K10
C 1932		CKSYB475K10
C 1933		CKSYB225K16
C 1951		CKSQYB102K50
C 1952		CKSYB106K6R3
C 1953		CKSQYB103K25
C 1954		CKSQYB103K25
C 1955		CKSRYB102K50
C 1958		CKSRYB102K50

F Unit Number : CWM7008(FH-P6600R/EW)
Unit Name : Panel PCB Unit

MISCELLANEOUS

D	1101	LED	CL170SRCD
D	1102	LED	CL170SRCD
D	1103	LED	CL170SRCD
D	1105	LED	CL170SRCD
S	1101	Spring Switch	CSN1051
IL	1101	Lamp 40mA 14V	CEL1648
IL	1102	Lamp 40mA 14V	CEL1648

RESISTORS

R	1101	RS1/8S621J
R	1102	RS1/8S391J
R	1103	RS1/8S621J
R	1104	RS1/8S391J

CAPACITORS

C	1101	CKSQYB103K25

F Unit Number : CWM7003(FH-P6600/ES)
Unit Name : Panel PCB Unit

MISCELLANEOUS

D	1101	LED	CL170FGCD
D	1102	LED	CL170FGCD
D	1103	LED	CL170FGCD
D	1105	LED	CL170FGCD
S	1101	Spring Switch	CSN1051
IL	1101	Lamp 40mA 14V	CEL1647
IL	1102	Lamp 40mA 14V	CEL1647

RESISTORS

R	1101	RS1/8S331J
R	1102	RS1/8S391J
R	1103	RS1/8S331J
R	1104	RS1/8S391J

CAPACITORS

C	1101	CKSQYB103K25

I Unit Number : EWY1031
Unit Name : Deck Unit

MISCELLANEOUS

IC	251	IC	HA12216F
IC	351	IC	PA2020A
Q	271	Transistor	2SC4116
D	352	Diode	1SS355
VR	301	Semi-fixed 33kΩ(B)	CCP1280
VR	302	Semi-fixed 33kΩ(B)	CCP1280

RESISTORS

R	255	RS1/16S181J
R	256	RS1/16S181J
R	257	RS1/16S183J
R	258	RS1/16S183J
R	259	RS1/16S133J
R	260	RS1/16S133J
R	261	RS1/16S274J
R	262	RS1/16S274J
R	271	RS1/16S183J
R	272	RS1/8S0R0J
R	273	RS1/8S0R0J
R	274	RS1/8S0R0J
R	275	RS1/16S473J
R	276	RS1/16S104J
R	277	RS1/16S224J
R	278	RS1/16S104J
R	281	RS1/8S0R0J
R	282	RS1/8S0R0J
R	283	RS1/8S0R0J
R	284	RS1/8S0R0J
R	285	RS1/16S0R0J
R	287	RS1/16S0R0J
R	288	RS1/16S0R0J
R	289	RS1/16S0R0J
R	291	RS1/8S0R0J
R	292	RS1/10S0R0J
R	293	RS1/10S0R0J
R	294	RS1/10S0R0J
R	321	RS1/8S0R0J
R	322	RS1/8S0R0J
R	351	RS1/16S102J
R	352	RS1/16S102J
R	353	RS1/16S102J
R	354	RS1/16S102J
R	355	RS1/10S274J
R	362	RS1/8S301J
R	373	RS1/8S0R0J
R	374	RS1/8S0R0J
R	375	RS1/8S0R0J
R	401	RS1/16S153J
R	402	RS1/16S332J
R	403	RS1/16S911J
R	404	RS1/16S274J

CAPACITORS

C	251	CKSRYB391K50
C	252	CKSRYB391K50
C	253	CKSRYB391K50
C	254	CKSRYB391K50
C	255	CKSRYB103K50
C	256	CKSRYB103K50
C	271	CEJA1R0M50
C	272	CKSQYB104K16
C	301	CKSQYB104K16
C	302	CKSQYB104K16
C	309	CKSQYB104K16
C	310	CKSQYB104K16
C	351	CKSYB224K25
C	352	CKSRYB392K50
C	353	CKSRYB103K50
C	354	CKSRYB103K50
C	355	CKSYB104K50
C	356	CKSRYB103K50
C	401	CKSRYB392K50
C	402	CKSQYB334K16
C	403	CKSRYB223K25
C	404	CKSRYB103K50
C	405	CKSRYB333K16

J Unit Number :
Unit Name : Reel Sense PCB

MISCELLANEOUS

S	1	Switch(LOAD)	ESG1007
S	2	Switch(MODE)	ESG1007
S	3	Switch(70µs)	ESG1007
EGN	1	Photo-reflector	EGN1004

=====Circuit Symbol and No.		===Part Name	Part No.

G Unit Number : CWX2434
Unit Name : Control Unit(S8TX)

MISCELLANEOUS

IC	201	IC	UPD63711GC
IC	301	IC	BA5985FM
IC	701	IC	BA05SFP
Q	101	Transistor	2SB1132
D	801	Chip LED	CL200IRX
D	802	Chip LED	CL200IRX
S	801	Spring Switch(HOME)	CSN1051
S	802	Spring Switch(CLAMP)	CSN1052

RESISTORS

R	101		RS1/8S120J
R	102		RS1/8S100J
R	103		RS1/16S222J
R	201		RS1/16S104J
R	202		RS1/16S103J
R	203		RS1/16S393J
R	204		RS1/16S103J
R	205		RS1/16S103J
R	206		RS1/16S182J
R	207		RS1/16S123J
R	211		RS1/16S0R0J
R	212		RS1/16S272J
R	302		RS1/16S153J
R	303		RS1/16S103J
R	501		RS1/16S102J
R	502		RA4C681J
R	503		RS1/16S221J
R	504		RS1/16S221J
R	505		RS1/16S221J
R	801		RS1/8S751J
R	803		RS1/8S751J
R	901		RS1/16S681J
R	903		RS1/16S0R0J
R	904		RS1/16S681J
R	905		RS1/16S681J

CAPACITORS

C	101		CKSRYB102K50
C	102		CKSRYB104K16
C	103		CEV101M6R3
C	104		CEV470M6R3
C	105		CKSQYB334K16
C	106		CKSQYB334K16
C	107		CKSQYB334K16
C	201		CKSRYB104K16
C	202		CKSRYB471K50
C	203		CKSRYB104K16
C	205		CEV101M6R3
C	206		CKSRYB104K16
C	207		CKSRYB104K16
C	208		CKSRYB104K16
C	209		CKSRYB104K16
C	210		CKSRYB332K50
C	211		CKSRYB104K16
C	212		CKSRYB104K16
C	213		CKSRYB392K50
C	214		CKSRYB104K16
C	215		CKSRYB104K16
C	216		CCSRCJ3R0C50
C	217		CCSRCH270J50
C	218		CKSRYB104K16
C	219		CCSRCH181J50

=====Circuit Symbol and No.		===Part Name	Part No.
C	220		CCSRCH510J50
C	221		CKSRYB682K25
C	223		CCSRCH221J50
C	301		CEV101M10
C	702	10µF/10V	CCH1349
C	703		CKSQYB334K16

H Unit Number :
Unit Name : Photo Unit(S8)

Q	1	Photo-transistor	CPT230SX-TU
Q	2	Photo-transistor	CPT230SX-TU

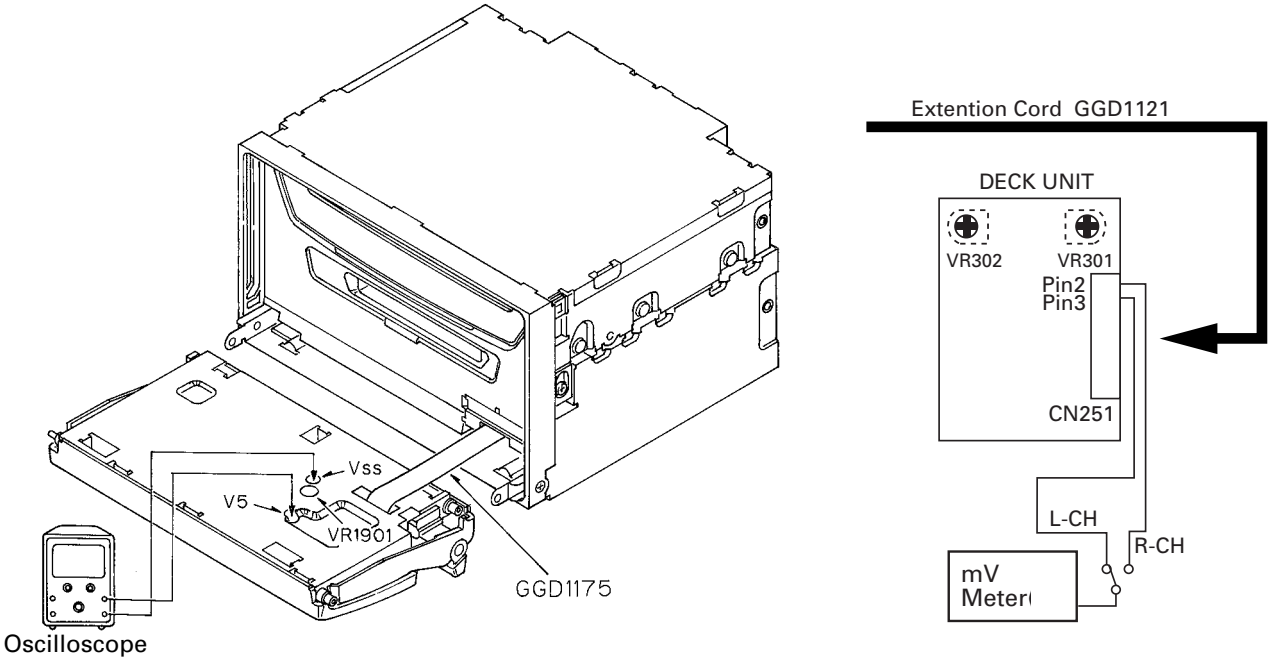
Miscellaneous Parts List

		Pickup Unit(Service)(P8)	CXX1285
M	1	Motor Unit(CARRIAGE)	CXB5827
M	2	Motor Unit(LOADING)	CXB5828
M	3	Motor Unit(SPINDLE)	CXB5829
M	1	Motor Unit(MAIN)	EXA1490
M	2	Motor Unit(SUB)	EXA1580
HD	1	Head Assy	EXA1589

6. ADJUSTMENT

6.1 GRILLE AND CASSETTE SECTION

● **Connection Diagram**



CONTRAST VOLTAGE ADJUSTMENT(GRILLE)

No.	Adjustment Point	Adjustment Method (Switch Position)
1	VR1901	Oscilloscope : -2.4V±0.1V

DOLBY B NR ADJUSTMENT(CASSETTE)

No.	Test Tape	Adjustment Point	Adjustment Method (Switch Position)
1	NCT-150 (400Hz,200nwb/m)	VR301(Lch),VR302(Rch)	mV Meter : –8.24dBm(300mV)±1dB (DOLBY NR Switch : OFF)

6.2 CD ADJUSTMENT

1) Precautions

- This unit uses a single power supply (+5V) for the regulator. The signal reference potential, therefore, is connected to REFO(approx. 2.5V) instead of GND.
  If REFO and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.
  Do not connect the negative probe of the measuring equipment to REFO and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to REFO with the channel 2 negative probe connected to GND.
  Since the frame of the measuring instrument is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.
  If by accident REFO comes in contact with GND, immediately switch the regulator or power OFF.

- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.

- Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.

- Since the protective systems in the unit's software are rendered inoperative in test mode, be very careful to avoid mechanical and /or electrical shocks to the system when making adjustment.

- Disc detection during loading and eject operations is performed by means of a photo transistor in this unit.Consequently, if the inside of the unit is exposed to a strong light source when the outer casing is removed for repairs or adjustment, the following malfunctions may occur.
  *During PLAY, even if the eject button is pressed,the disc will not be ejected and the unit will remain in the PLAY mode.
  *The unit will not load a disc.
  When the unit malfunctions this way, either re-position the light source, move the unit or cover the photo transistor.

2) Test Mode

This mode is used for adjusting the CD mechanism module of the device.

- Test mode starting procedure
  Reset while pressing the 4 and 6 keys together.

- Test mode cancellation
  Switch ACC, back-up OFF.

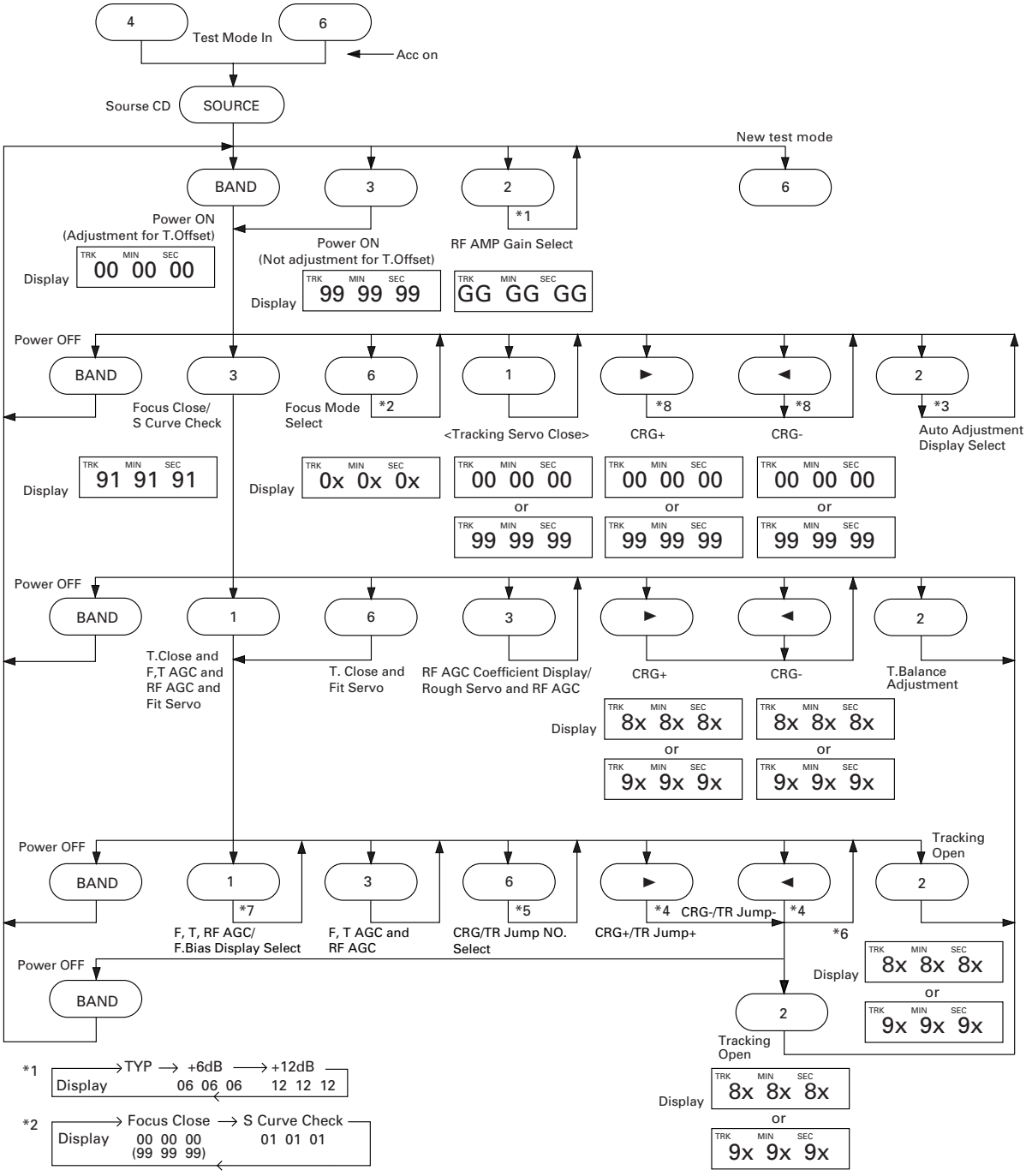
- After pressing the EJECT key, do not press any other key until the disk is completely ejected.

- If the ► or ◄ key is pressed while focus search is in progress, immediately turn the power off (otherwise the actuator may be damaged due to adhesion of the lenses).

- Jump operation of TRs other than 100TR continues after releasing the key. CRG move and 100TR jump operations are brought into the “Tracking close” status when the key is released.

- Powering Off/On resets the jump mode to “Single TR (91)”, the RF AMP gain setting to 0 dB, and the automatic adjustment value to the initial value.

● Flow Chart



*1 → TYP → +6dB → +12dB →
Display 06 06 06 12 12 12

*2 → Focus Close → S Curve Check →
Display 00 00 00 (99 99 99) 01 01 01

*3 → F.Offset Display → RF.Offset Display → F.Cansel Display →

F.Cancel Value = {Top Rank 8bit of Set Value (7F [H] to 80 [H]) + 128} / 4
= 63 [D] to (32 [D]) to 00 [D]

*4 Single TR/32TR/100TR

*5 → Single TR → 32TRK → 100TRK → CRG Move →
Display 9x(8x):91(81) 92(82) 93(83) 94(84)

*6 CRG Move, 100TR Jump Only

*7 → TRK, MIN, SEC → F.AGC Gain → T.AGC Gain → RF AGC Gain →
(F,T.AGC Gain = (Present Value/Initial Value) x 20)

*8 Voltage of CRG Motor = 2 [V]

6.3 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

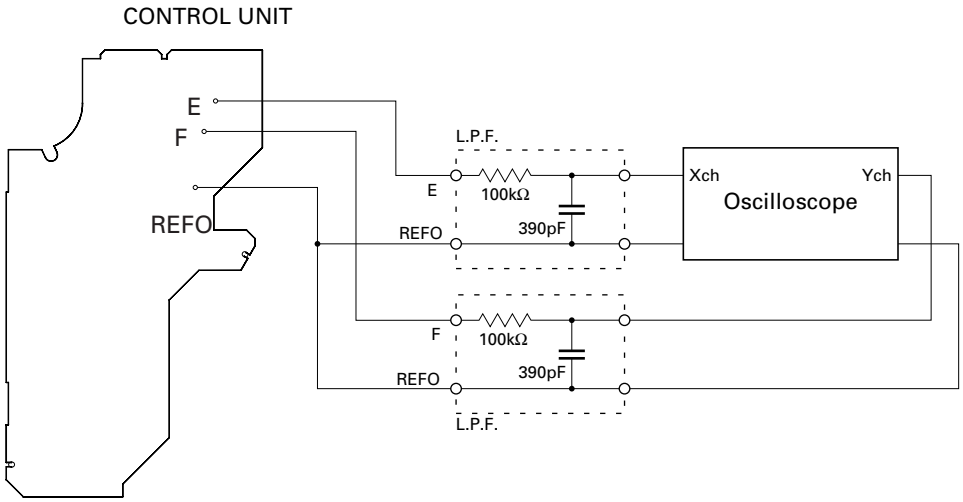
• **Note :**
The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

• **Purpose :**
To check that the grating is within an acceptable range when the PU unit is changed.

• **Symptoms of Mal-adjustment :**
If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

• **Method :**

• Measuring Equipment	• Oscilloscope, Two L.P.F.
• Measuring Points	• E, F, REFO
• Disc	• ABEX TCD-784
• Mode	• TEST MODE



• **Checking Procedure**
1. In test mode, load the disc and switch the 5V regulator on.
2. Using the ► and ◄ buttons, move the PU unit to the innermost track.
3. Press key **3** to close focus, the display should read "91". Press key **2** to implement the tracking balance adjustment the display should now read "81". Press key **3** 2 times. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75° . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

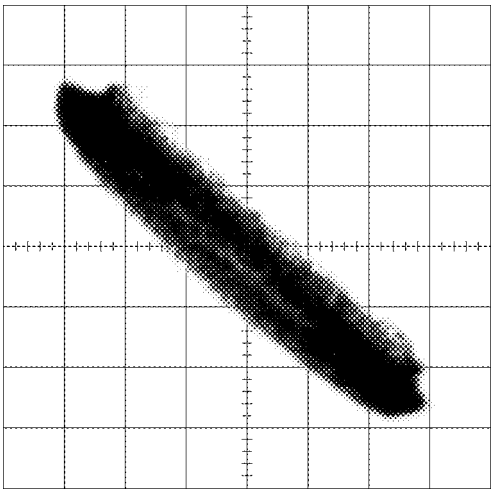
• **Note**
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

• **Hint**
Reloading the disc changes the clamp position and may decrease the "wobble".

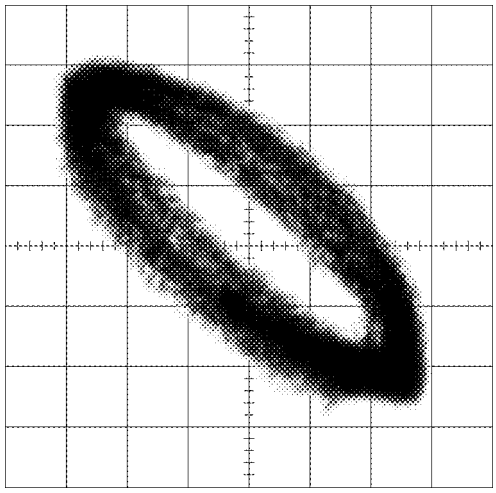
Grating waveform

Ech → Xch 20mV/div, AC
Fch → Ych 20mV/div, AC

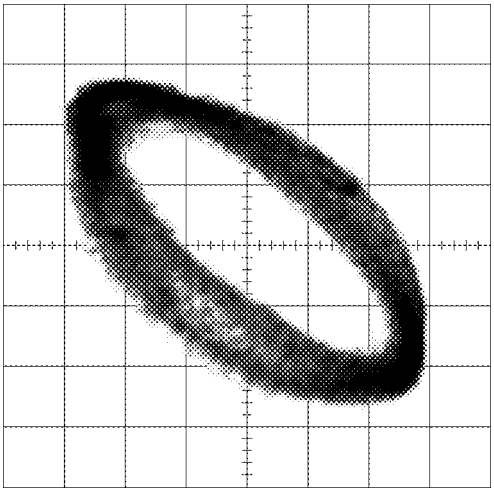
0°



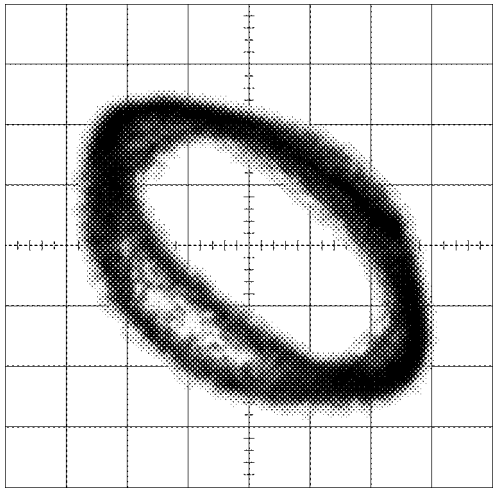
30°



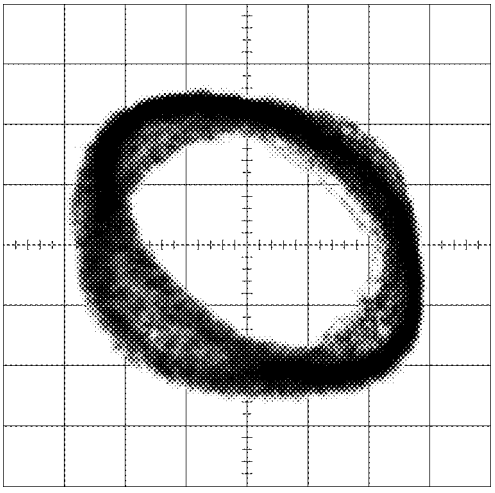
45°



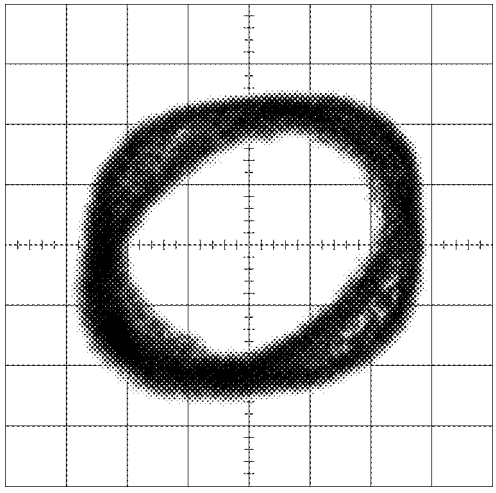
60°



75°



90°



7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TEST MODE

● Error Messages

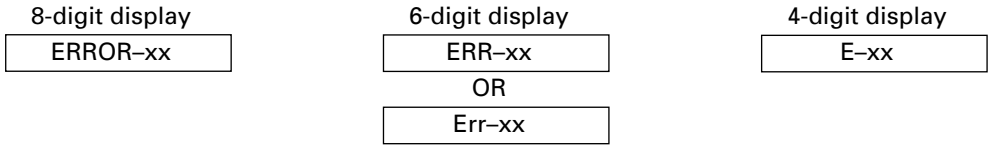
If a CD is not operative or stopped during operation due to an error, the error mode is turned on and cause(s) of the error is indicated with a corresponding number. This arrangement is intended at reducing nonsense calls from the users and also for facilitating trouble analysis and repair work in servicing.

(1) Basic Indication Method

1) When SERRORM is selected for the CSMOD (CD mode area for the system), error codes are written to DMIN (minutes display area) and DSEC (seconds display area). The same data is written to DMIN and DSEC. DTNO remains in blank as before.

2) Main unit display examples

Depending on display capability of LCD used, display will vary as shown below. xx contains the error number.



(2) Error Code List

Code	Class	Displayed error code	Description of the code and potential cause(s)
10	Electricity	Carriage Home NG	CRG can't be moved to inner diameter. CRG can't be moved from inner diameter. → Failure on home switch or CRG move mechanism.
11	Electricity	Focus Servo NG	Focusing not available. → Stains on rear side of disc or excessive vibrations on REWRITABLE.
12	Electricity	Spindle Lock NG	Spindle not locked. Sub-code is strange (not readable). → Failure on spindle, stains or damages on disc, or excessive vibrations.
		Subcode NG	A disc not containing CD-R data is found. Turned over disc are found, though rarely. → Failure on home switch or CRG move mechanism.
		RF AMP NG	An appropriate RF AMP gain can't be determined. → CD signal error.
17	Electricity	Setup NG	APC protection doesn't work. Focus can be easily lost. → Damages or stains on disc, or excessive vibrations.
30	Electricity	Search Time Out	Failed to reach target address. → CRG tracking error or damages on disc.
A0	System	Power Supply NG	Power (VD) is ground faulted. → Failure on SW transistor or power supply (failure on connector).

Remarks: Mechanical errors are not displayed (because a CD is turned off in these errors).
Unreadable TOC does not constitute an error. An intended operation continues in this case.
A newly designed main unit must conform to the example given above.
Upper digits of an error code are subdivided as shown below:
1x: Setup relevant errors, 3x: Search relevant errors, 3x: Search relevant errors, Ax: Other errors.

● New Test Mode

S-CD plays the same way as before.

If an error such as off focus, spindle unlocking, unreadable sub-code, or sound skipping occurs after setup, its cause and time occurred (in absolute time) are displayed.

During setup, operational status of the control software (internal RAM: CPOINT) is displayed.

These displays and functions are prepared for enhancing aging in the servicing and efficiency of trouble analysis.

(1) Shifting to the New Test Mode

① Turn on the current test mode.

② Select S-CD for the source through the specified procedure including use of the [SOURCE] key, and inserting the disc. Then, press the [6] key while maintaining the regulator turned off.

③ After the above operations, the new test mode remains on irrespective of whether the S-CD is turned on or off. You can reset the new test mode by turning on the reset start.

* With some products, the new test mode can be reset through the same operations as that employed for shifting to the STBY mode (while maintaining the Acc turned off).

(2) Key Correspondence

Key	Test mode		New test mode	
	Power Off	Power On	In-play	Error Production
BAND	To power on (offset adjustment performed)	To power off	–	Time/Err.No. switching
►	–	FWD-Kick	FF/TR+	–
◄	–	REV-Kick	REV/TR-	–
1	–	T.Close (AGC performed) /parameter display switching	Scan	–
2	RF AMP gain switching	Parameter display switching /T.BAL adjustment/T.Open	Mode	–
3	To power on (offset adjustment not performed)	F.Close/RF AGC/F.T.AGC	–	–
6	–	F.Mode switching /T.Close (no AGC)/Jump switching	Auto/Manu	T.No./Time switching

Note: Eject and CD on/off is performed in the same procedure as that for the normal mode.

(3) Cause of Error and Error Code

Code	Class	Contents	Description and cause
40	Electricity	Off focus detected.	FOK goes low. → Damages/stains on disc, vibrations or failure on servo.
41	Electricity	Spindle unlocked.	FOK = Low continued for 50 msec. → Damages/stains on disc, vibrations or failure on servo.
42	Electricity	Sub-code unreadable.	Sub-code was unreadable for 50 msec. → Damages/stains on disc, vibrations or failure on servo.
43	Electricity	Sound skipping detected.	Last address memory function was activated. → Damages/stains on disc, vibrations or failure on servo.

Note: Mechanical errors during aging are not displayed.

The error codes should be indicated in the same way as in the normal mode.

(4) Display of Operational Status (CPOINT) during Setup

Status No.	Contents	Protective action
00	CD+5V ON process in progress.	None
01	Servo LSI initialization (1/3) in progress.	None
02	Servo LSI CRAM initialization in progress.	None
03	Servo LSI initialization (2/3) in progress.	None
04	Offset adjustment (1/3) in progress.	None
05	Offset adjustment (2/3) in progress.	None
06	Offset adjustment (3/3) in progress.	None
07	FZD adjustment in progress.	None
08	Servo LSI initialization (3/3) in progress.	None
10	Carriage move to home position started.	None
11	Carriage move to home position started.	None
12	Carriage is moving toward inner diameter.	Specified 10 seconds has been passed or failure on home switch.
13	Carriage is moving toward outer diameter.	Specified 10 seconds has been passed or failure on home switch.
14	Carriage outer kick in progress.	None
15	Carriage outer diameter feed (1 second) in progress.	None
20	Servo close started.	None
21	Pre-processing for focus search started.	None
22	Spindle rotation and focus search started.	None
23	Waiting for focus close (XSI=Low).	Specified focus search time has been passed.
24	Standing by after focus close is over.	Specified focus search time has been passed.
25	Focus search preprocessing is in progress while setup protection is turned on.	None
26	Focus search preprocessing is in progress while focus recovery is turned on.	None
27	Wait time after focus close is set up.	Off focus.
28	Standing by after focus close is over.	Off focus.
29	Setup (1/2) before T balance adjustment is started.	Off focus.
30	Setup (2/2) before T balance adjustment is started.	Off focus.
31	T balance adjustment started.	Off focus.
32	T balance adjustment (1/2).	Off focus.
33	T balance adjustment (2/2).	Off focus.
34	Waiting for spindle rotation to end. Spindle rough servo.	Off focus.
35	Standing by after spindle rough servo is over.	Off focus.
36	RF AGC started.	Off focus.
37	RF AGC started.	Off focus.
38	RF AGC ending process in progress.	Off focus.
39	Tracking close in progress.	Off focus.
40	Standing by after tracking is closed. Carriage closing in progress.	Off focus.
41	Focus/tracking AGC started.	Off focus.
42	Focus AGC started.	Off focus.
43	Focus AGC in progress.	Off focus.
44	Tracking AGC in progress.	Off focus.
45	Standing by after focus/tracking AGC are over.	Off focus.
46	Spindle processes applicable servo.	Off focus.
47	Check for servo close is started.	Off focus.
48	Check of LOCK pin started.	Off focus or spindle not locked.
49	RF AGC started.	Off focus.
50	RF AGC in progress.	Off focus.
51	Standing by after RF AGC is over.	Off focus.

(5) Display Examples

1) During Setup (When status no. = 11)

TRK No.	MIN.	SEC.
11	11'	11"

2) During Operation (TOC read, TRK search, Play, FF and REV)

The same as in the normal mode.

3) When a Protection Error Occurred

Switch to the following displays (A) and (B) using the [BAND] switch:

(A) Error occurrence timing display in absolute time.

An example: Error occurred in 12th tune at 34'56" in absolute time.

TRK No.	MIN.	SEC.
12	34'	56"

(B) Error No. display

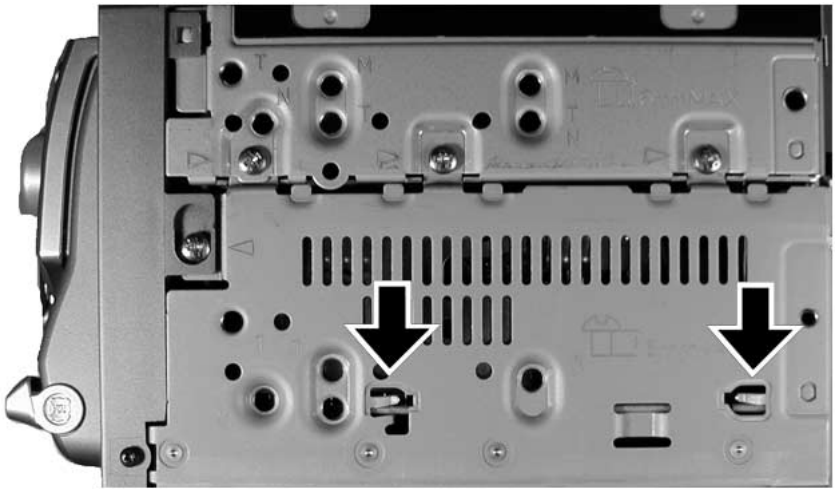
An example: Error #40 (Off focus is detected)

ERROR-40

7.1.2 DISASSEMBLY

Notes: (Disassembly and assembly)

● **Two bending projections are provided on the right side of the product and one bending projections are provided on the back side of the product. Handle with care during assembly/disassembly.**



● **Wire arrangement when connecting the 2-Pin cable**

After connecting the 2-pin cable (to the CD mechanism) on the mother board, arrange the cable as shown below:

Bend the 2 clampers leftwards to secure the cable as shown in fig.a.

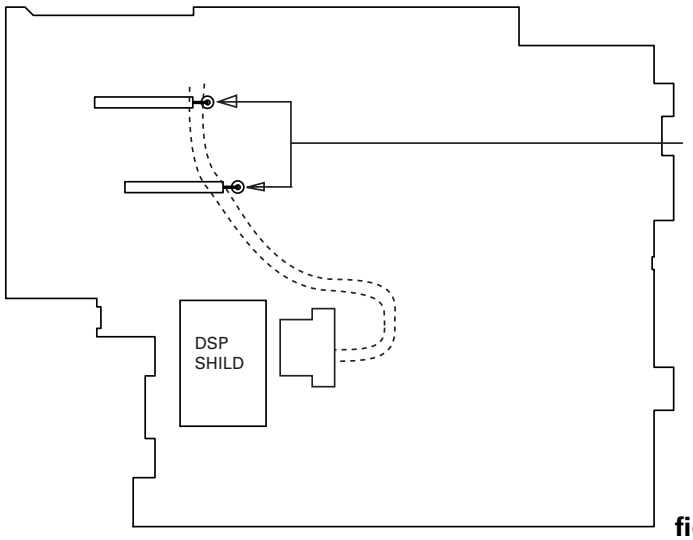


fig.a

● Correctly set the folded FFC, located on the 2nd-floor chassis under the CD mech, as shown in fig. b. Prevent the folded part of the FFC from coming into the chassis center hole for the SPDL motor.

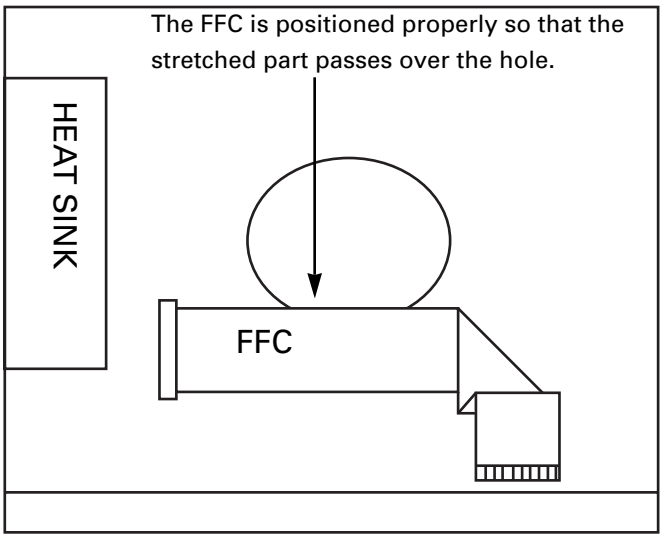


Fig. b: OK.

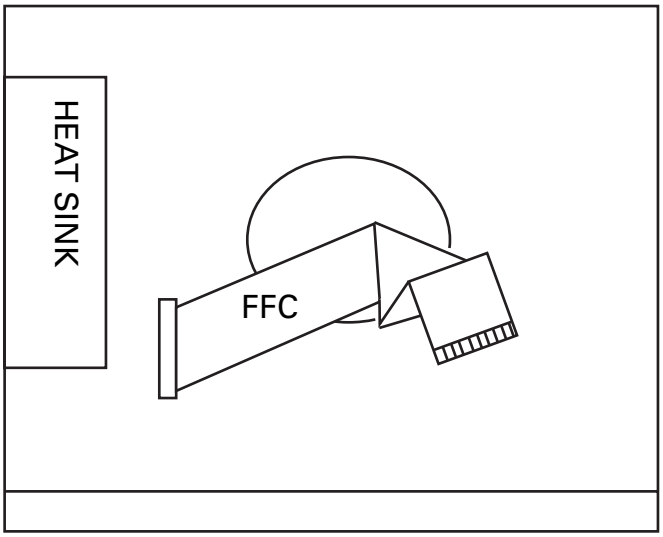


Fig. c : NG.

● **Removing the Upper Case (not shown)**

Remove the upper case.

● **Removing the CD Mechanism Module (Fig.1)**

1 Remove the four screws.

Disconnect the connector and then remove the CD Mechanism Module.

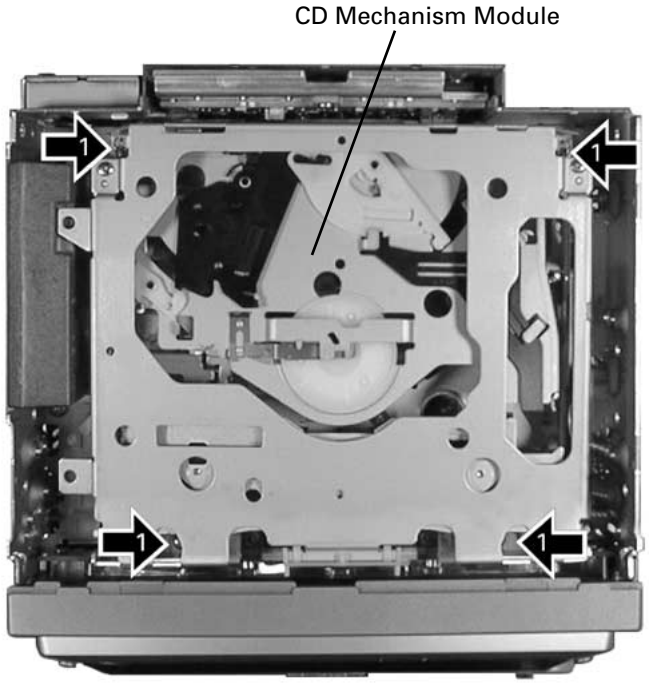


Fig.1

● Removing the Grille Unit (Fig.2 and Fig.3)

Use a pair of tweezers or something like that. Insert the tips into the bottom panel slits and slide the rail in the direction indicated by an arrow in Fig.2 until the grille moves down to the bottom.(Fig.2)

1 Remove the screw. (Fig.3)

2 Remove the screw. (Fig.3)

3 Remove the screw. (Fig.3)

Note: In the other side, remove the fixing three screws in the same manner as above. Then, you can remove the Grille Unit.

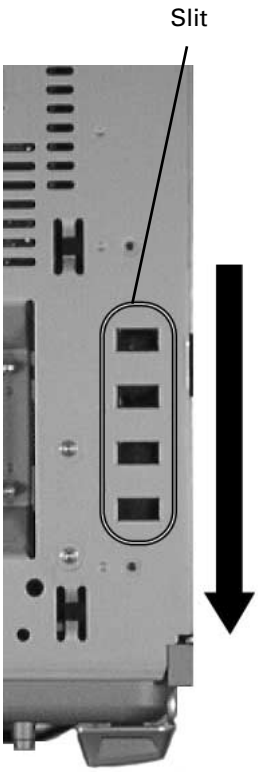


Fig.2

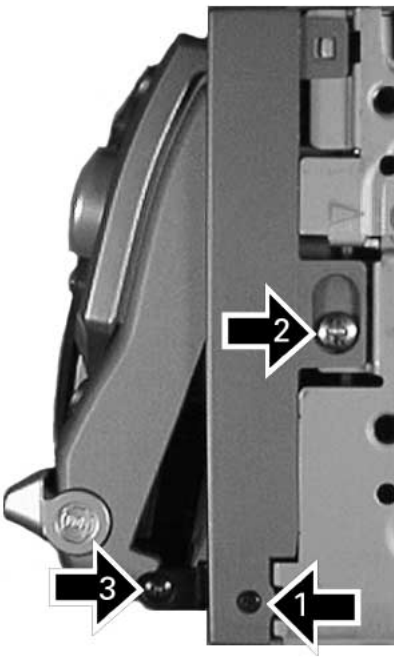


Fig.3

● Removing the Heat Sink (Fig.4)

1 Remove the two screws.

2 Remove the two screws.

3 Remove the two screws and then remove the Heat Sink.

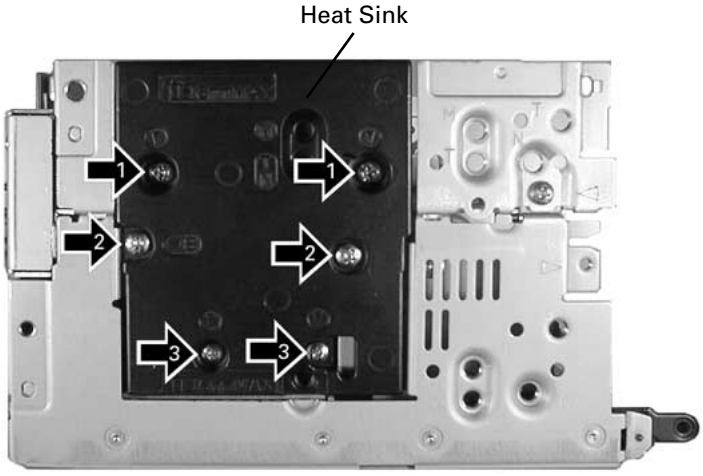


Fig.4

● **Removing the Chassis Unit (Fig.5)**

1 Remove the six screws and then remove the Chassis Unit.

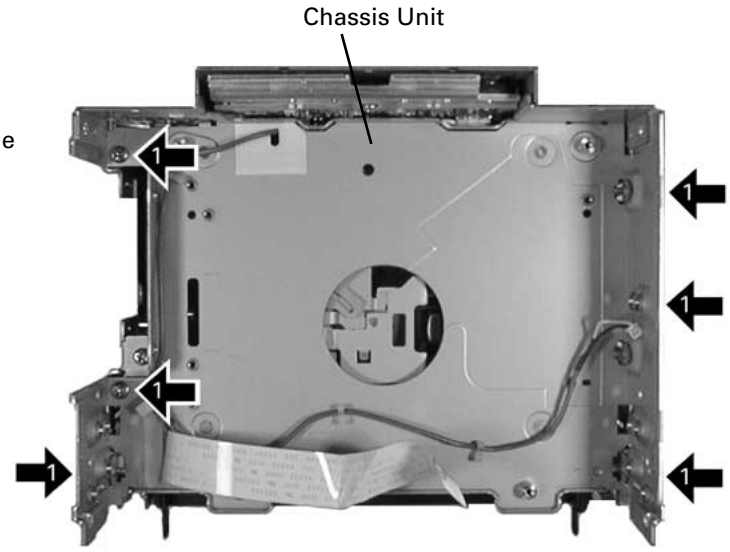


Fig.5

● **Removing the Cassette Mechanism Module (Fig.6)**

1 Remove the four screws and then remove the Cassette Mechanism Module.

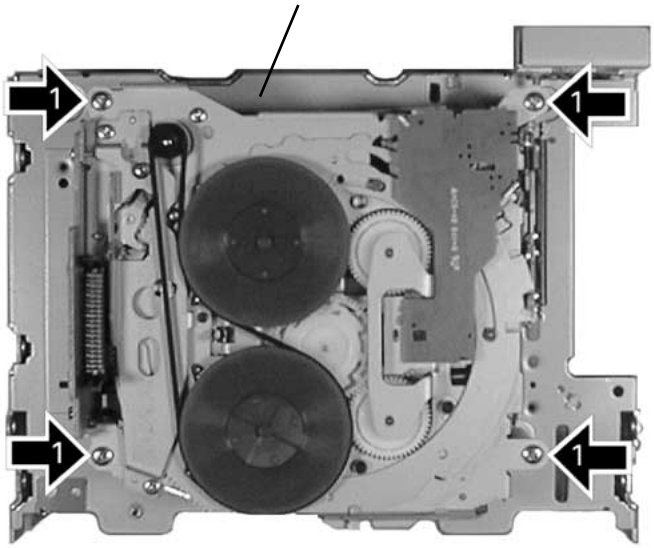


Fig.6

● **Removing the Audio Amp Unit (Fig.7)**

1 Remove the five screws.

2 Straighten the tabs at three locations indicated.
Remove the tab at back side.(not shown)

3 Remove the screw.

4 Disconnect the connector and then remove the Audio Amp Unit

Note: While removing the Audio Amp Unit, slant the unit and be careful not to have the unit caught by the two hooks on the right side panel.

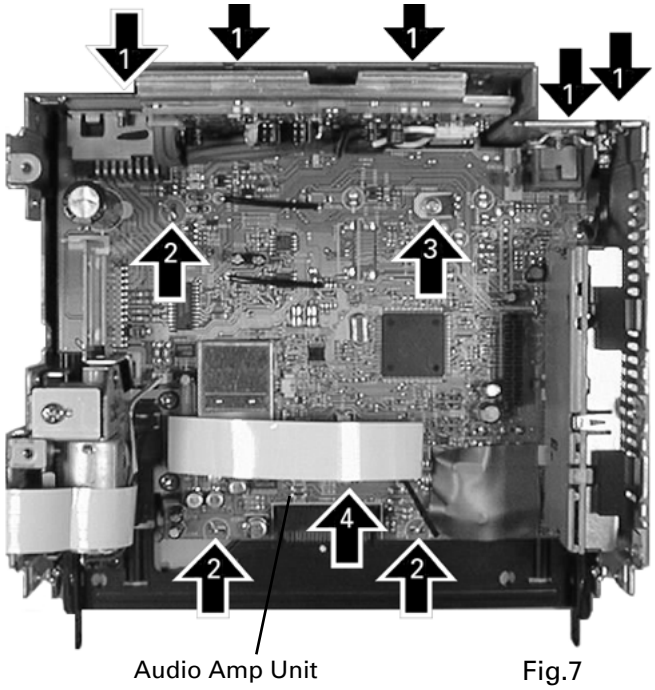
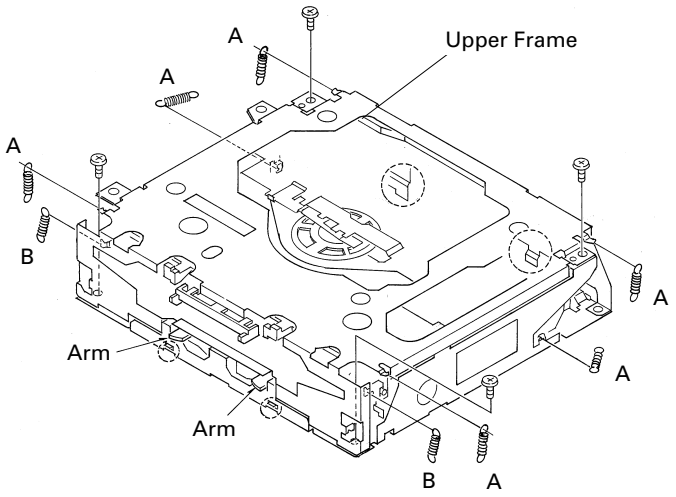


Fig.7

● Removing the Upper Frame

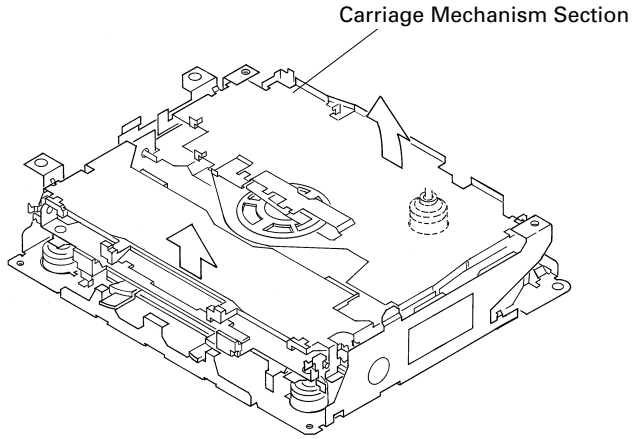
1. Remove six Springs A, two Springs B and four Screws.
2. Remove two Tabs situated on rear side of the Upper Frame, remove two Arms on the front side, then remove two Tabs on the front side.



● Removing the Carriage Mechanism Section

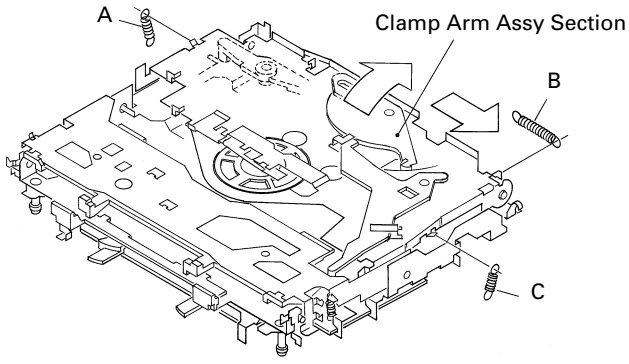
1. Disengage the Carriage Mechanism Section from the two dampers situated in the front side by driving it up, then disengage and remove the mechanism from the one damper by driving it up aslant into front side direction.

Note : When assembling the Carriage Mechanism Section, coat the dampers with alcohol prior to the assembly.



● Removing the Clamp Arm Assy Section

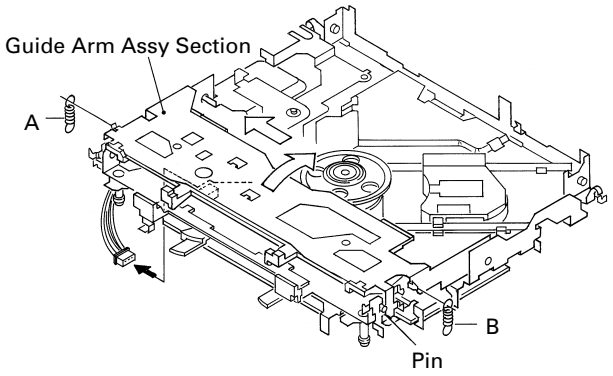
1. Remove a Spring A, a B and a Spring C.
2. Drive the Clamp Arm Assy Section up into rear side direction, then disengage the arm from its current position Finally, drive the assembly approximately 45 degrees upward, then slide the assembly toward right side to remove it.



● Removing the Guide Arm Assy Section

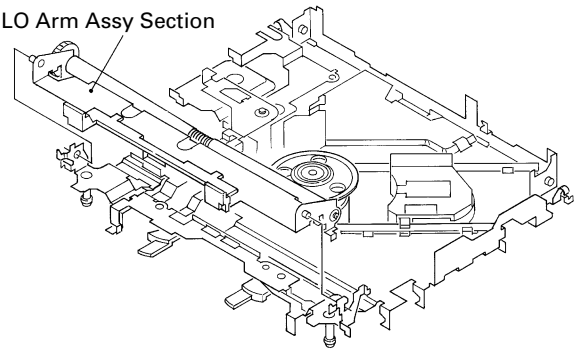
1. Remove a connector, a spring A and B
2. Drive the Guide Arm Assy Section up aslant into rear side direction, then remove it from a Pin. Finally, drive the assembly approximately 45 degrees upward, then slide the assembly toward left side to remove it.

Note : When assembling the Guide Arm Assy Section, route the cord inside the assembly. In this operation, care must be exercised so that cord may be caught by the gear.



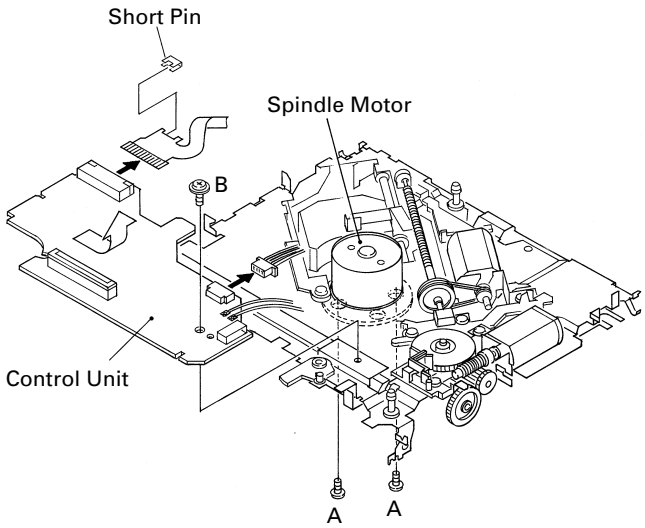
● Removing the LO Arm Assy Section

1. Remove two Pins to dismount the LO Arm Assy Section.



● Removing the Control Unit and the Spindle Motor

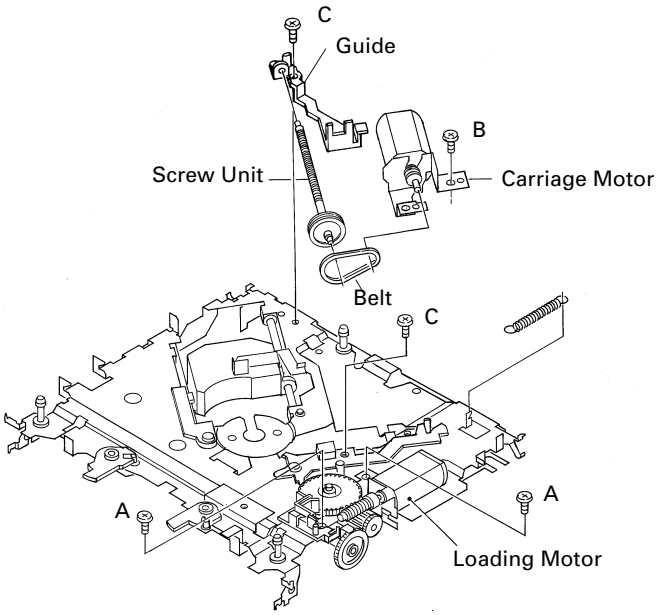
1. Remove from the connector after mounting the short pin on the flexible PCB of the pickup unit.
2. Remove two Soldered joints, then remove two Screws A.
3. Remove two connectors and a Screw B.
4. Disengage the Control Unit from two Tabs, then dismount the unit by sliding it toward left.
5. Dismount the Spindle Motor.



● Removing the Loading Motor and Carriage Motor

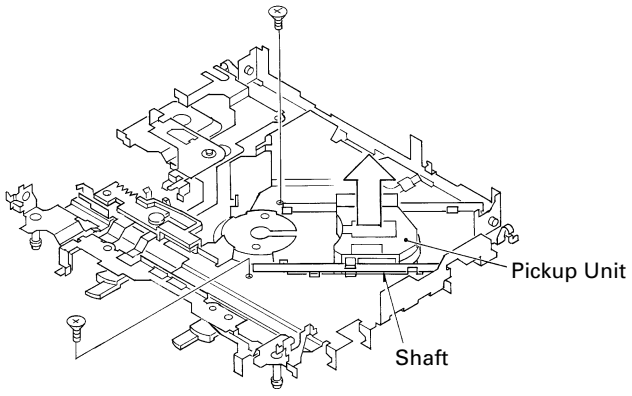
1. Remove the Spring and two Screws A.
2. Dismount the Loading Motor.
3. Remove the Belt, a Screw B, two Screws C, a Guide and a Screw Unit.
4. Dismount the Carriage Motor.

Note : When assembling the Belt, use care so that it may not be contaminated by grease.

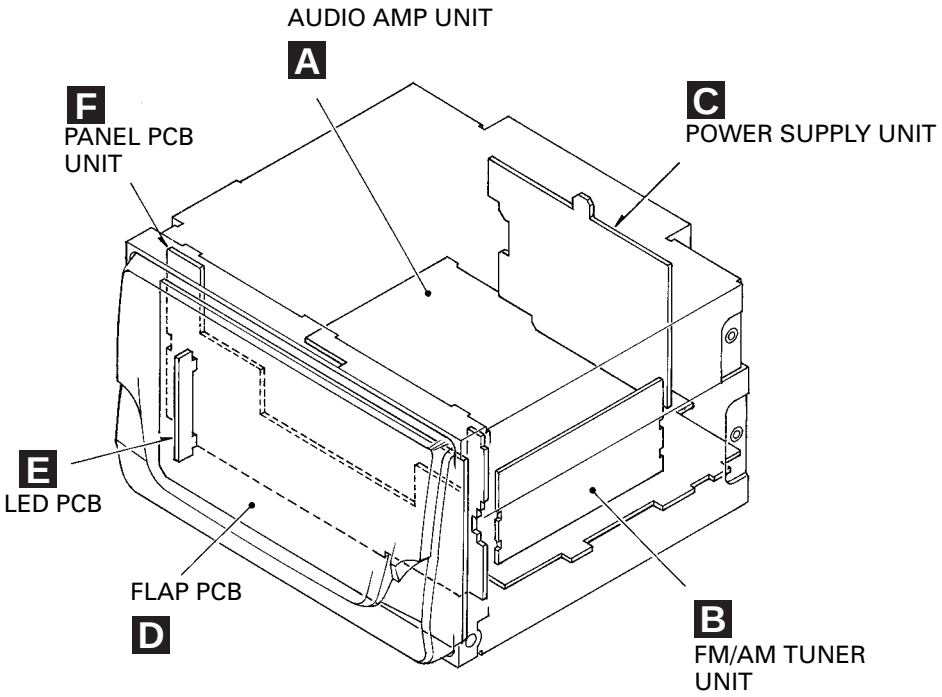


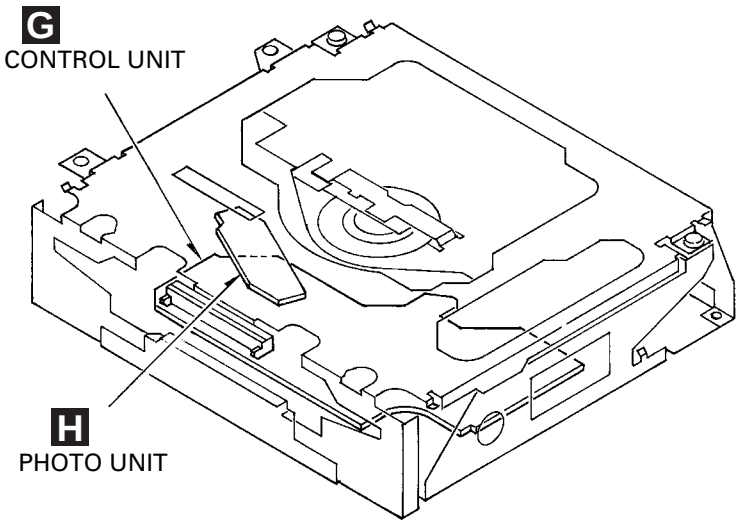
● Removing the Pickup Unit

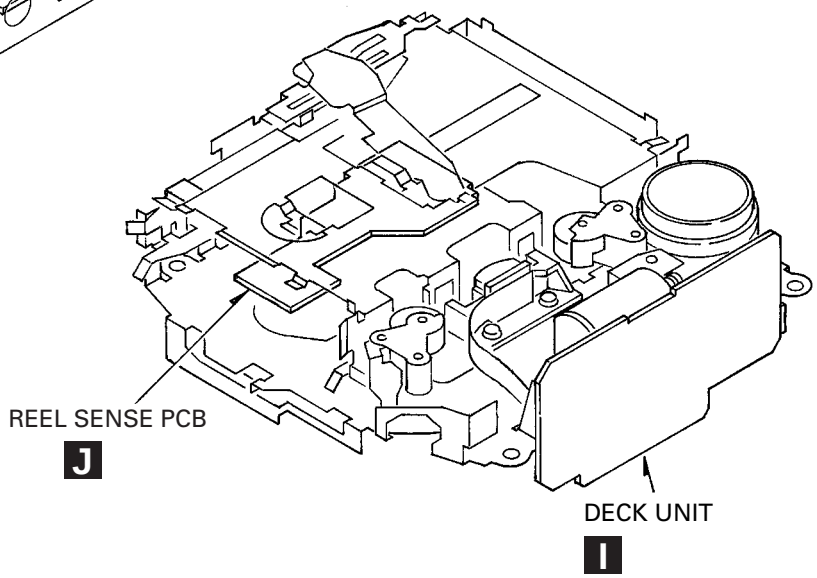
1. Remove two Screws and a Shaft.
2. Dismount the Pickup Unit.



7.1.3 PCB LOCATIONS







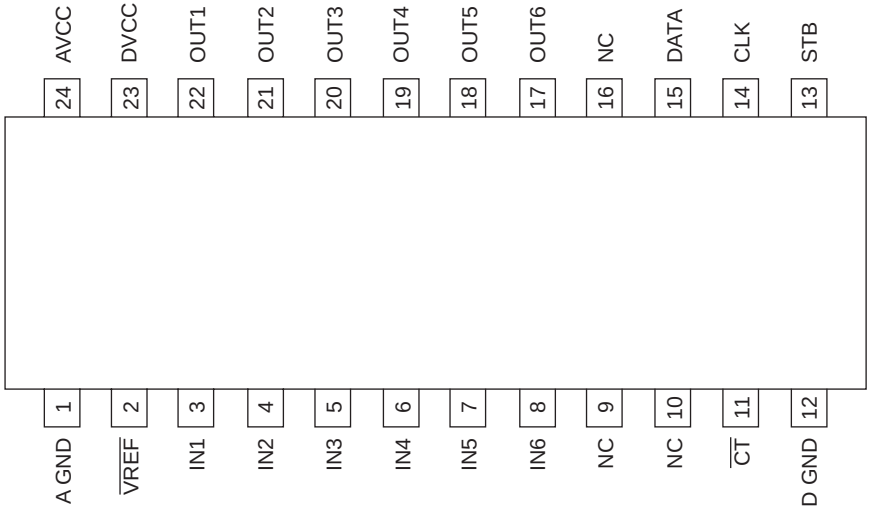
7.2 PARTS

7.2.1 IC

PM0017AM
PE5124A(FH-P6600R/EW)
PE5122A(FH-P6600/ES)
PDG255A
HA12216F
PE5149A
BA033T
SED1526F0A

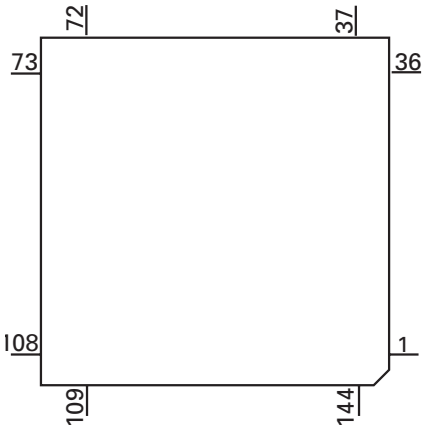
UPD63711GC
M62361FP
PQ20RX1S-L

*PM0017AM



IC's marked by* are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

*PE5124A(FH-P6600R/EW),*PE5122A(FH-P6600/ES)



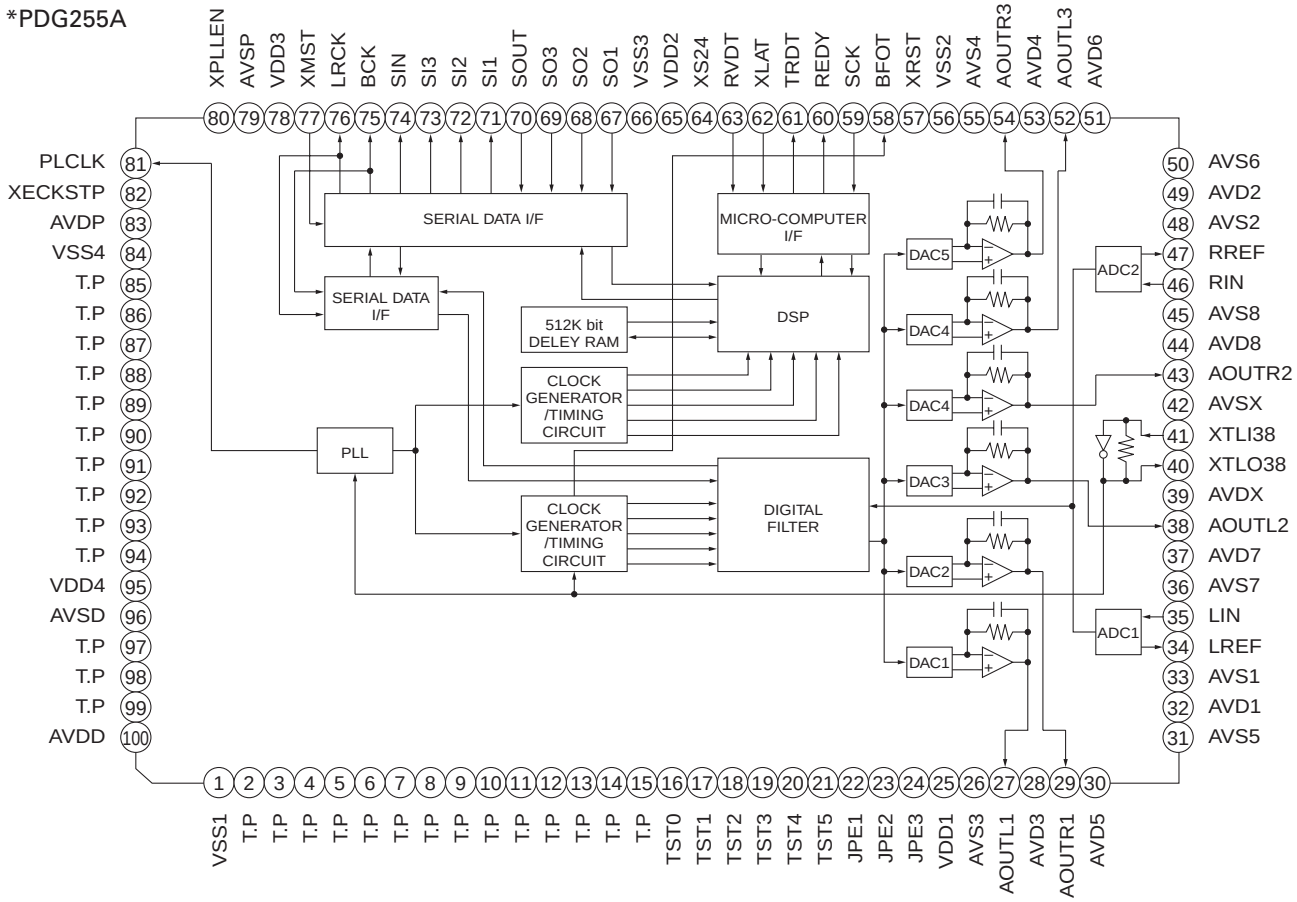
● **Pin Functions (PE5124A,PE5122A)**

Pin No.	Pin Name	I/O	Function and Operation
1	$\overline{ST}$	I	Stereo input
2	SD	I	SD input
3	RECIVE	O	During RDS data reception output
4	LOCH	O	LOC H output
5	LOCL	O	LOC L output
6	$\overline{ANTFIX}$	O	Tuner diversity fix select output
7	AM/$\overline{FM}$	O	AM/FM select output
8	$\overline{TMUTE}$	O	Tuner mute output
9	RESET	I	Reset Input
10	X2		Crystal oscillator connection pin
11	X1		Crystal oscillator connection pin
12	VSS		GND
13	RSGC1		Regulator output connect
14	VDD0		Power supply
15	REGC0		Regulator output connect
16	VSS0		GND
17	XT2		Not used
18	XT1		Not used
19	CKSEL	I	Master clock frequency select input
20	$\overline{DRST}$	O	Reset output
21	$\overline{RDSLK}$	I	RDS LK signal input
22	RDT	I	RDS data input
23	NL2DT	I	RDS noise level input
24	$\overline{CURRQ}$	O	Tuner voltage FIX output
25	CD5VON	O	CD +5V power supply control output
26	BKLT	O	Back light illumination output
27	DIMMER	O	DIMMER select output
28	VPP		ROM write power supply
29	SOR0	O	Source select output
30	SOR1	O	Source select output
31	SOR2	O	Source select output
32	SOR3	O	Source select output
33	VST	O	Strobe pulse output for electronic volume
34	VCK	O	Clock output for electronic volume
35	VDT	O	Data output for electronic volume
36	FLAPILM	O	Flap illumination output
37	DADT	O	DA data output (TV tuner screen control)
38	DACK	O	DA clock output (TV tuner screen control)
39	DAST	O	DA strobe output (TV tuner screen control)
40	XA0	O	Control signal distinguishing data from microcomputer
41	DSPRST	O	DSP reset control
42	MCKOUT	O	MCK gate control output
43	DSPCD	O	DSP address output
44	DSPRDY	I	Microcomputer I/F reception enable output
45	ROMCS	O	ROM correction chip select output
46	ROMCLK	O	ROM correction clock output
47	ROMDATA	O	ROM correction data output
48	$\overline{BSRQ}$	I	P-BUS service request input pin
49	$\overline{BRXEN}$	I/O	P-BUS reception enable input/output
50	$\overline{BRST}$	O	P-BUS reset input
51	LOCK	I	Spindle lock detector input
52	FOK	I	FOK signal input
53	MIRR	I	MIRR detection signal input terminal
54	CLAMP	I	Disc clamp sense input
55	CONT	O	Servo driver power supply control
56	VDCONT	O	VD control output
57	CDMUTE	O	CD mute output
58	CDEJECT	O	Load motor eject output

Pin No.	Pin Name	I/O	Function and Operation
59	CDLOAD	O	Load motor loading control output
60	$\overline{\text{XSTB}}$	O	CD LSI strobe output
61	VSS2		GND
62	VDD1		Device power supply terminal
63	PLAY	O	MS gain select output
64	NR	O	Dolby NR ON/OFF select output
65	SC1	O	Cassette mechanism sub motor control output
66	SC2	O	Cassette mechanism sub motor control output
67	CM	O	Cassette mechanism capstan motor control output
68	MSIN	I	MS sense
69	DIRO	O	Head F/R select output
70	MTLSW	I	Metal sense input
71	LOADSW	I	Tape loading input
72	POS	I	Cassette mechanism position sense input
73	RES	I	Cassette mechanism reverse end sense input
74	NES	I	Cassette mechanism forward end sense input
75	STBY	O	Stand-by output terminal
76	RIMUTE	O	R.I. mute output
77	ILMPW	O	Illumination power supply control output
78	ANTPW	O	Antenna output
79	MUTE	O	System mute output
80	SYSPW	O	System power supply control output
81	DALMON	O	DFS alarm output
82	$\overline{\text{FOPNSW}}$	I	FLAP open sense SW input
83	$\overline{\text{FOLSSW}}$	I	FLAP close sense SW input
84	FALP0	O	FLAP motor driver control output
85	FLAP1	O	FLAP motor driver control output
86	FLAPPW	O	FLAP motor driver power supply control output
87	ASENBO	O	Slave power supply control output
88	IPPW	O	IP-BUS driver power supply control output
89	TX	O	Digital audio interface data output terminal
90	RX	I	IP-BUS data input
91	SUBOK	O	MD service request output
92	RECMUTE	O	MD recording mute output
93	TSTB	O	CDTEXT strobe output
94	SHELL	I	Cassette shell input
95	$\overline{\text{XRST}}$	O	CD LSI reset output
96	$\overline{\text{BSENS}}$	I	Back up power sense input
97	$\overline{\text{ASENS}}$	I	ACC power sense input
98	$\overline{\text{ISENS}}$	I	Illumination sense input
99	PACK	I	CDTEXT pack synchroning signal input
100	RCK	I	FROM clock input
101	$\overline{\text{LDET}}$	I	PLL lock sense input
102	NC		Not used
103	AVDD		Positive power supply terminal for analog circuit
104	AVSS		A/D GND
105	AVREF		A/D converter reference voltage
106	SL	I	SD level input from tuner
107	NL	I	Noise level input
108	SDBW	I	SDBW input
109	MODEL	I	Model select input
110	EJTSNS	I	Disc EJECT position detect
111	DSCSNES	I	DISC insertion sense input
112	VDSENS	I	Over voltage sense input
113	TEMP	I	Temperature detector input
114	$\overline{\text{FLAPEJSW}}$	I	FLAP CD EJECT position sense input
115	FLSEN0	I	FLAP position sense input
116	FLSEN1	I	FLAP position sense input

Pin No.	Pin Name	I/O	Function and Operation
117	TELIN	I	Telephone mute input
118	TESTIN	I	Test program mode input
119	XSI	I	LSI data input
120	XSO	O	LSI data output
121	XSCK	O	LSI clock output
122	TSI	I	Test program serial input
123	TSO	O	Test program serial output
124	TSCK	O	Test program clock output
125	TUNPCE2	O	PLL IC chip enable
126	TUNPCE	O	PLL IC chip enable
127	TUNPDI	I	PLL IC data input
128	TUNPDO	O	PLL IC data output
129	TUNPCK	O	PLL IC clock
130	PCL	O	Clock adjustment output
131	DSPMS		DSP slave/master select
132	BSI	I	P-BUS serial data input
133	BSO	O	ALPINE-BUS output
134	BSCK	O	P-BUS clock output
135	VSS3		GND
136	VDD2		Device power supply terminal
137	SWVDD	O	Grille power supply control output
138	DPDT	O	Display data output
139	KEYDT	I	Display data input
140	DSPCK	O	DSP serial clock output
141	DSPOUT	O	DSP serial data output
142	DSPIN	I	DSP serial data input
143	RDS57K	I	57kHzBP-OUT sense input
144	PEE	O	Beep tone output

*PDG255A

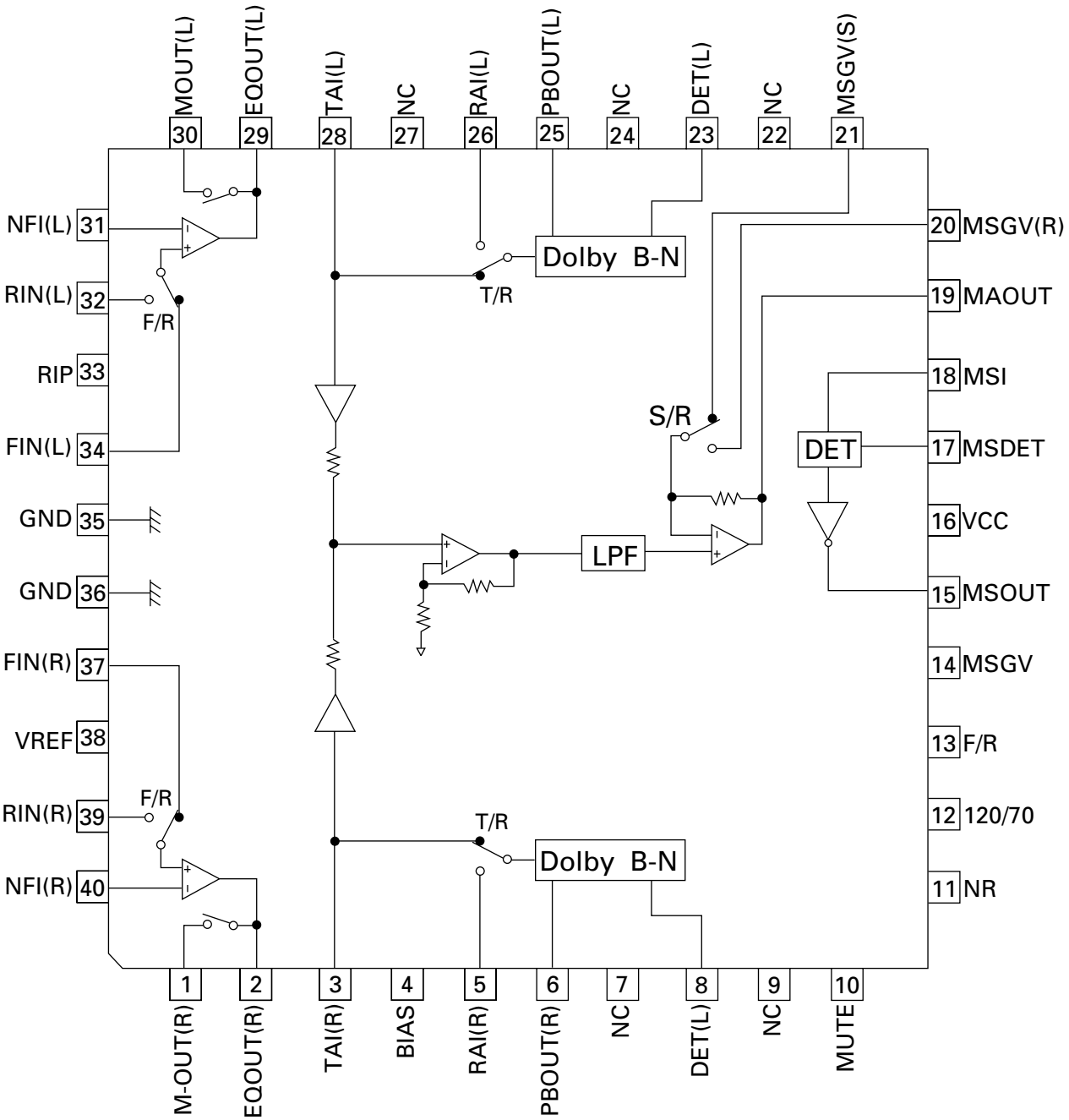


● **Pin Functions (PDG255A)**

Pin No.	Pin Name	I/O	Function and Operation
1	VSS1	-	Digital GND
2-15	T.P	I	Test input pin Normal : "L"
16-21	TST0-5	I	Test terminal Normal : "L"
22-24	JPE1-3	I	External condition jump terminal "H" : Condition jump
25	VDD1	-	Digital GND
26	AVS3	-	DA converter1 GND
27	AOUTL1	O	DA converter1 Lch output
28	AVD3	-	DA converter1 power supply
29	AOUTR1	O	DA converter1 Rch output
30	AVD5	-	DA converter1 power supply
31	AVS5	-	DA converter1 GND
32	AVD1	-	AD converter Lch power supply
33	AVS1	-	AD converter Lch GND
34	LREF	O	Connect to Pass-con for AD converter
35	LIN	I	AD converter Lch analog input
36	AVS7	-	DA converter2 GND
37	AVD7	-	DA converter2 power supply
38	AOUTL2	O	DA converter2 Lch output
39	AVDX	-	Analog power supply for master clock
40	XTLO38	O	Crystal oscillator circuit output
41	XTLI38	I	Crystal oscillator circuit input
42	AVSX	-	Analog GND for master clock
43	AOUTR2	O	DA converter2 Rch output
44	AVD8	-	DA converter2 power supply
45	AVS8	-	DA converter2 GND
46	RIN	I	AD converter Rch analog input
47	RREF	O	Connect to Pass-con for AD converter
48	AVS2	-	AD converter Rch GND
49	AVD2	-	AD converter Rch power supply
50	AVS6	-	DA converter3 GND
51	AVD6	-	DA converter3 power supply
52	AOUTL3	O	DA converter3 Lch output
53	AVD4	-	DA converter3 power supply
54	AOUTR3	O	DA converter3 Rch output
55	AVS4	-	DA converter3 GND
56	VSS2	-	Digital GND
57	XRST	I	System reset input "L" : Reset
58	BFOT	O	Master clock output
59	SCK	I	Shift clock input of micro computer interface
60	REDY	O	Forward permission signal output "L" : forward prohibition
61	TRDT	O	Data output of micro computer interface
62	XLAT	I	Latch input of micro computer interface
63	RVDT	I	Data input of micro computer interface
64	XS24	I	24bit/32bit slot select for serial data "L" : 24bit slot [available only slave mode]
65	VDD2	-	Digital power supply
66	VSS3	-	Digital GND
67-69	SO1-3	O	Serial data output1-3
70	SOUT	O	Serial data output
71-73	SI1-3	I	Serial data input1-3
74	SIN	I	Serial data input
75	BCK	I/O	Serial bit forward clock of serial input/output data
76	LRCK	I/O	Sampling frequency clock of serial input/output data
77	XMST	I	Master/Slave mode select input for BCK,LRCK "L" : master mode
78	VDD3	-	Digital GND
79	AVSP	-	PLL GND
80	XPLLEN	I	PLL Enable Normal : "L"

Pin No.	Pin Name	I/O	Function and Operation
81	PLCLK	O	PLL clock output
82	XECKSTP	I	PLL clock output control "L" : PLCLK output "L" "H" : PLL clock output
83	AVDP	-	PLL power supply
84	VSS4	-	Digital GND
85-94	T.P	I	Test input pin Normal : "L"
95	VDD4	-	Digital power supply
96	AVSD	-	DRAM GND
97-99	T.P	I	Test input pin Normal : "L"
100	AVDD	-	DRAM power supply

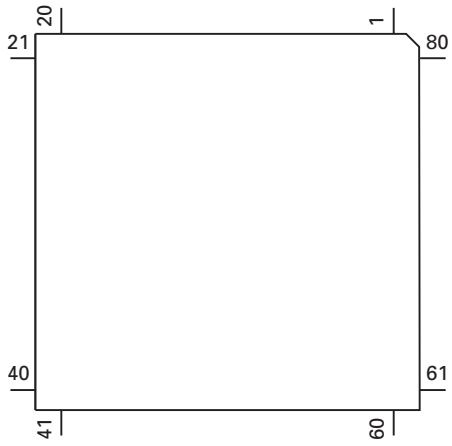
HA12216F



● **Pin Functions (PE5149A)**

Pin No.	Pin Name	I/O	Format	Function and Operation
1	$\overline{\text{AVSW}}$	O		AV switch output
2,3	NC			Not used
4	AVSS	I		A/D GND
5,6	NC			Not used
7	AVREF	I		A/D converter reference voltage
8	DISPDIN	I		Display data input
9	KEYDOUT	O	C	Key data output
10–15	NC			Not used
16	TESTDIN	I		Test data input
17	TESTDOUT	O	C	Test data output
18	TESTCLK			Test data clock
19–26	SD0-7	I/O	C	Display driver command/Data input/output
27–32	NC			Not used
33	GND			GND
34–39	NC			Not used
40	$\overline{\text{RD}}$	O	C	Read strobe
41	$\overline{\text{WR}}$	O	C	Write strobe
42,43	NC			Not used
44	LCDCTRL	O	C	Display driver control
45	LCDRESET	O	C	Display driver reset control
46–49	NC			Not used
50	$\overline{\text{EJECTCD}}$	I		CD eject key input
51	$\overline{\text{EJECTMDCC}}$	I		MD/CC eject key input
52–59	NC			Not used
60	$\overline{\text{RESET}}$	I		Reset input
61	$\overline{\text{REMIN}}$	I		Key cord signal input
62	TESTIN	I		Test program mode input
63	$\overline{\text{CE}}$			Devise select input
64–67	NC			Not used
68	VDD			Power supply
69	X2			Crystal oscillator connection pin
70	X1			Crystal oscillator connection pin
71–73	NC			Not used
74	AVDD			Positive power supply terminal for analog circuit
75	AVREF0			GND
76–80	KD0-4	I		Key data input

*PE5149A



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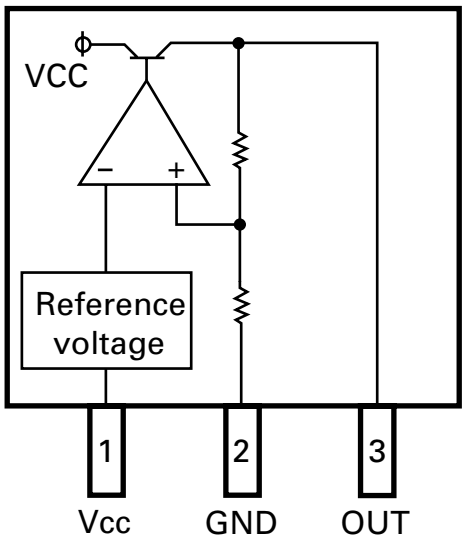


● Pin Functions (SED1526F0A)

Pin No.	Pin Name	I/O	Function and Operation
1-5	V1-V5		Multilevel power supply for driving LCD
6	VR	I	Voltage adjustment
7	VDD		+5V power supply
8	VOUT	O	Ascending voltage output
9	CAP2-	O	Ascending voltage capacitor connection
10	CAP2+	O	Not used
11	CAP1-	O	Ascending voltage capacitor connection
12	CAP2+	O	Ascending voltage capacitor connection
13	VSS		GND
14	M/S	I	IC master/slave operation select
15	SR2	I	MPU interface select, pararel/serial data input select and reset input
16	SR1	I	MPU interface select, pararel/serial data input select and reset input
17	$\overline{WR}$	I	MPU WR signal connection
18	$\overline{RD}$	I	MPU RD signal connection
19	CS2	I	Chip select signal
20	CS1	I	Chip select signal
21	A0	I	Data/command discrimination
22	FR	O	Not used
23	CL	O	Not used
24-31	D0-D7	I/O	Serial data bus
32-39	COM0-7	O	Output for LCD common driving
40-48	NC		Not used
49-128	SEG0-79	O	Output for driving segment of LCD

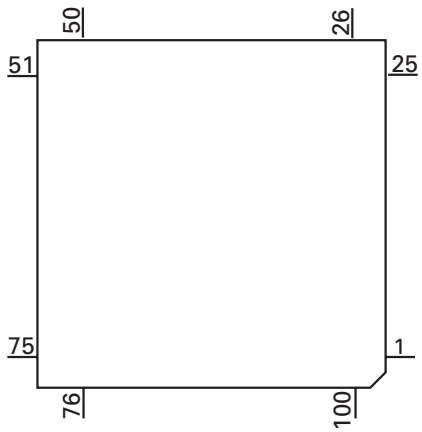
*SED1526F0A

● **Pin Functions (UPD63711GC)**

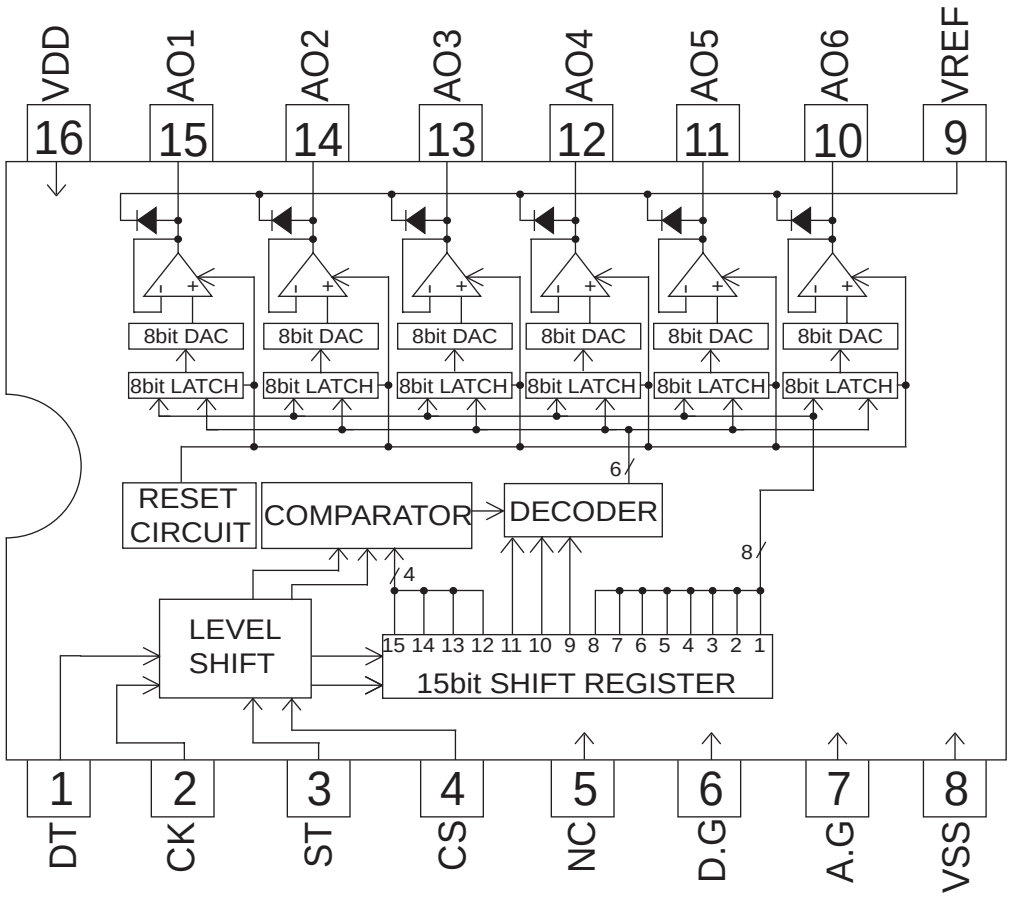
Pin No.	Pin Name	I/O	Function and Operation
1	D.GND		Logic circuit GND
2	RFOK	O	RFOK signal output
3	$\overline{RST}$	I	Reset signal input
4	A0	I	Command/parameter identification signal input
5	$\overline{STB}$	I	Data strobe signal input
6	$\overline{SCK}$	I	Clock signal input for serial data input/output
7	SO	O	Serial data and status signal output
8	SI	I	Serial data input
9	$\overline{XTALEN}$	I	Crystal oscillation control pin
10	D.VDD		Positive power supply terminal to logic circuit
11	DA.VDD		Positive power supply terminal to D/A converter
12	R_OUT	O	Right channel audio output signal
13	DA.GND		D/A converter GND
14	REGC	I	The outside putting capacitor connection pin for SCF regulator
15	DA.GND		D/A converter GND
16	L_OUT	O	Left channel audio output signal
17	DA.VDD		Positive power supply terminal to D/A converter
18	R+	O	Right channel audio data output
19	R-	O	Right channel audio data output
20	L-	O	Left channel audio data output
21	L+	O	Left channel audio data output
22	X.VDD		Positive power supply terminal to crystal oscillation circuit
23	XTAL	I	Crystal oscillator connect pin
24	$\overline{XTAL}$	O	Crystal oscillator connect pin
25	X.GND		Crystal oscillation circuit GND
26	D.VDD		Positive power supply terminal to logic circuit
27	EMPH	O	Output pin for the pre-emphasis data in the sub-Q code
28	FLAG	O	Flag output pin to indicate that audio data currently being output consists of noncorrectable data
29	DIN	I	Serial data input to internal DAC
30	DOUT	O	Serial audio data output
31	SCKIN	I	Serial clock input to internal DAC
32	SCKO	O	Audio data that is output from DOUT changes at rising edge of this clock
33	LRCKIN	I	LRCK signal input to internal DAC
34	LRCK	O	Signals to distinguish the right and left channels of the audio data output from DOUT
35	HOLD	O	Defect detection output
36	TX	O	Digital audio interface data output
37	D.GND		Logic circuit GND
38	C16M	O	Oscillator clock buffering output
39	LIMIT	I	Status of the pin is output at Bit 5 of the status output
40	D.VDD		Positive power supply terminal to logic circuit
41	LOCK	O	EFM synchronous detection signal
42	RFCK	O	Frame synchronous signal of XTAL-system
43	MIRR	O	MIRR output
44	PLCK	O	Monitor pin of bit clock
45	D.GND		Logic circuit GND
46	C1D1	O	Output pin for indicating the C1 error correction results
47	C1D2	O	Output pin for indicating the C1 error correction results
48	C2D1	O	Output pin for indicating the C2 error correction results
49	C2D2	O	Output pin for indicating the C2 error correction results
50	C2D3	O	Output pin for indicating the C2 error correction results
51	D.VDD		Positive power supply terminal to logic circuit
52	PACK	O	CD-TEXT PACK synchronous signal
53	TSO	O	CD-TEXT data serial output
54	TSI	I	CD-TEXT control parameter serial input
55	$\overline{TSCK}$	I	CD-TEXT serial clock input
56	TSTB	I	CD-TEXT parameter strobe signal input
57	D.GND		Logic circuit GND

Pin No.	Pin Name	I/O	Function and Operation
58	TEST0	I	Test pin
59	TEST1	I	Test pin
60	ATEST	O	Test pin
61	A.GND		Analog circuit GND
62	FD	O	Focus drive output
63	TD	O	Tracking drive output
64	SD	O	Sled drive output
65	MD	O	Spindle drive output
66	DAC0	O	DAC output for adjustment
67	DAC1	O	DAC output for adjustment
68	DAC2	O	DAC output for adjustment
69	DAC3	O	DAC output for adjustment
70	A.VDD		Positive power supply terminal to analog circuit
71	EFM	O	EFM signal output
72	ASY	I	EFM comparator reference voltage input
73	C3T		3T detection capacitor additional pin
74	RFI	I	RF signal input for EFM data regulation
75	AGCO	O	RF signal output of after gain adjustment
76	AGCI	I	RF-AGC amplifier input
77	RFO	O	RF summing amplifier output
78	EQ2		RF amplifier equalizer parts additional pin
79	EQ1		RF amplifier equalizer parts additional pin
80	RF-	I	RF summing amplifier inverted input
81	A.GND		Analog circuit GND
82	A	I	Photo detector A input
83	C	I	Photo detector C input
84	B	I	Photo detector B input
85	D	I	Photo detector D input
86	F	I	Photo detector F input
87	E	I	Photo detector E input
88	A.VDD		Positive power supply terminal to analog circuit
89	REFOUT	O	Reference electric potential output
90	FE-	I	Focus error amplifier inverted input
91	FEO	O	Focus error amplifier output
92	TE-	I	Tracking error amplifier inverted input
93	TEO	O	Tracking error amplifier output
94	TE2	O	Tracking error output of after amplification
95	TEC	I	Tracking comparator input
96	A.GND		Analog circuit GND
97	PD	I	PD detection signal input for LD output monitor
98	LD	O	LD control current output
99	PN	I	APC circuit control polarity set pin
100	A.VDD		Positive power supply terminal to analog circuit

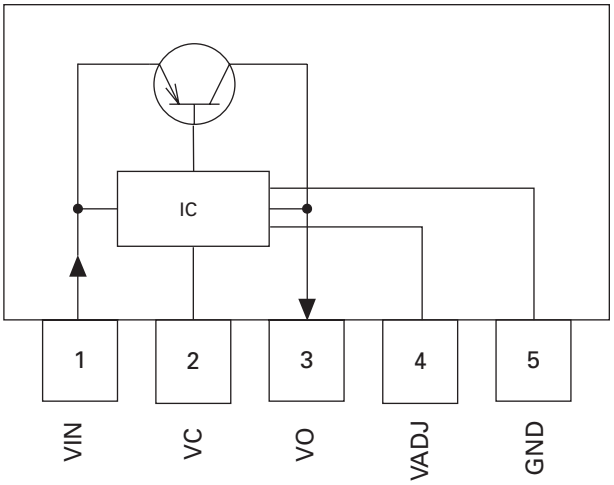
*UPD63711GC



M62361FP

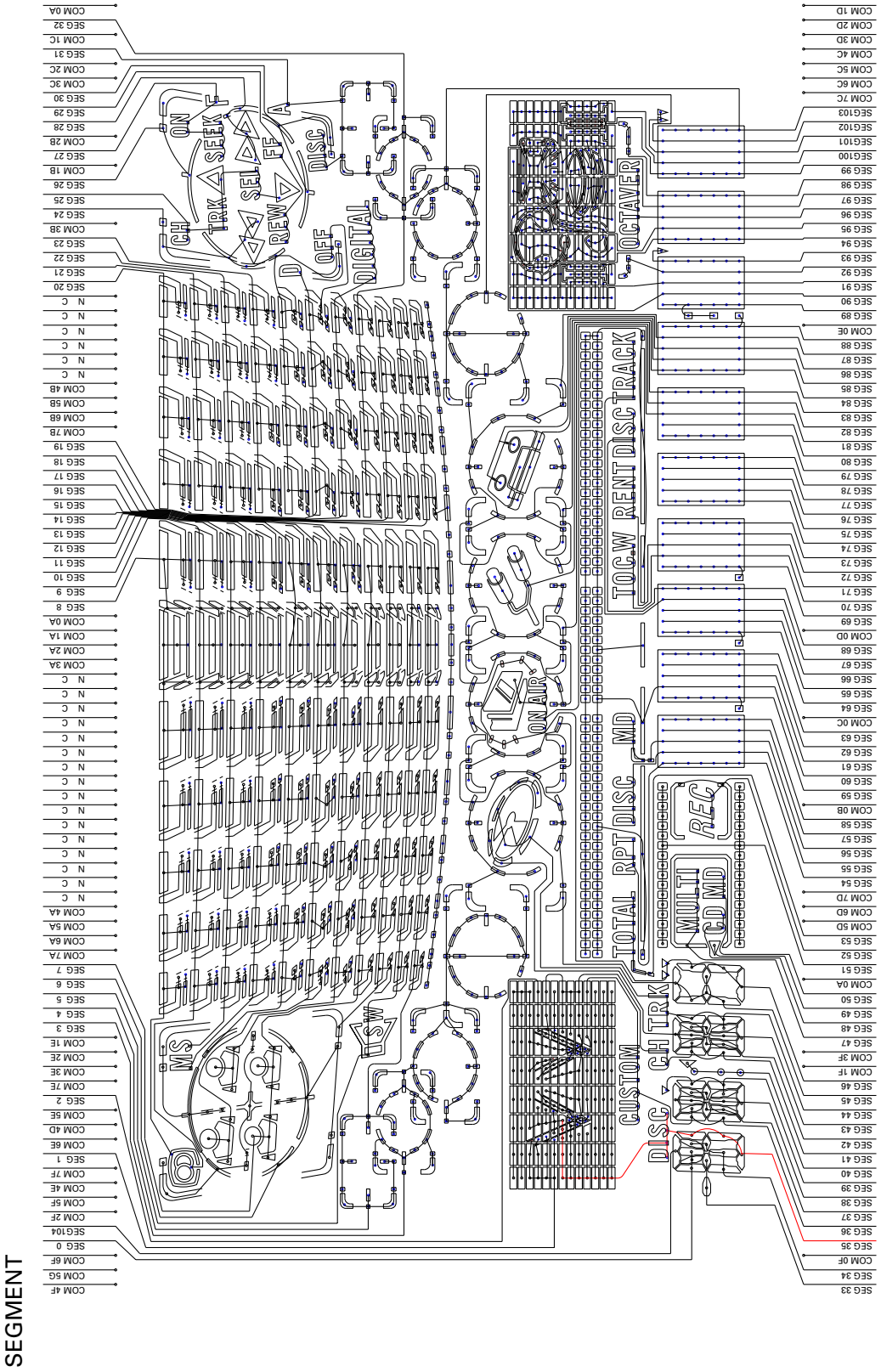


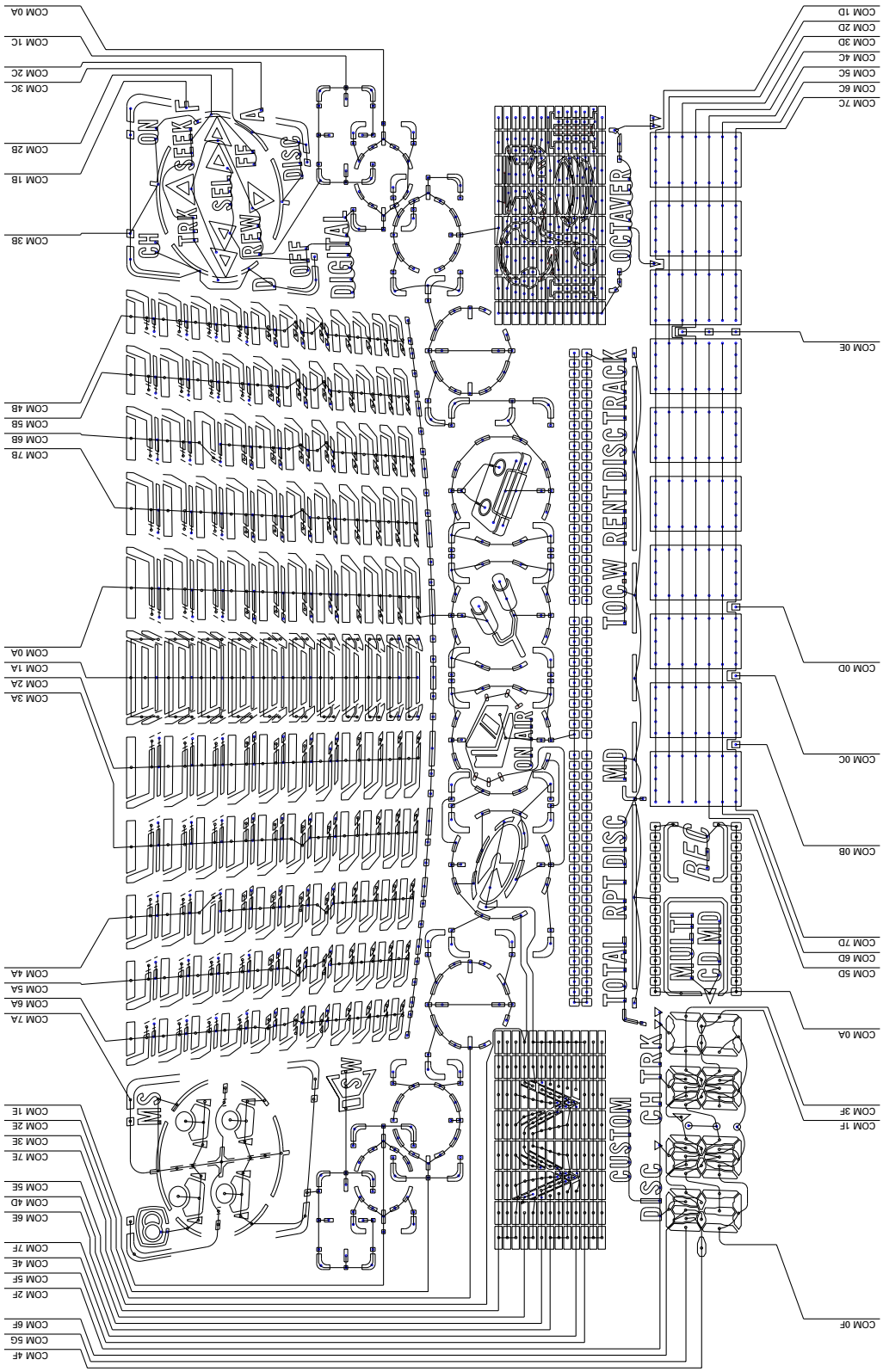
PQ20RX1S-L



7.2.2 DISPLAY

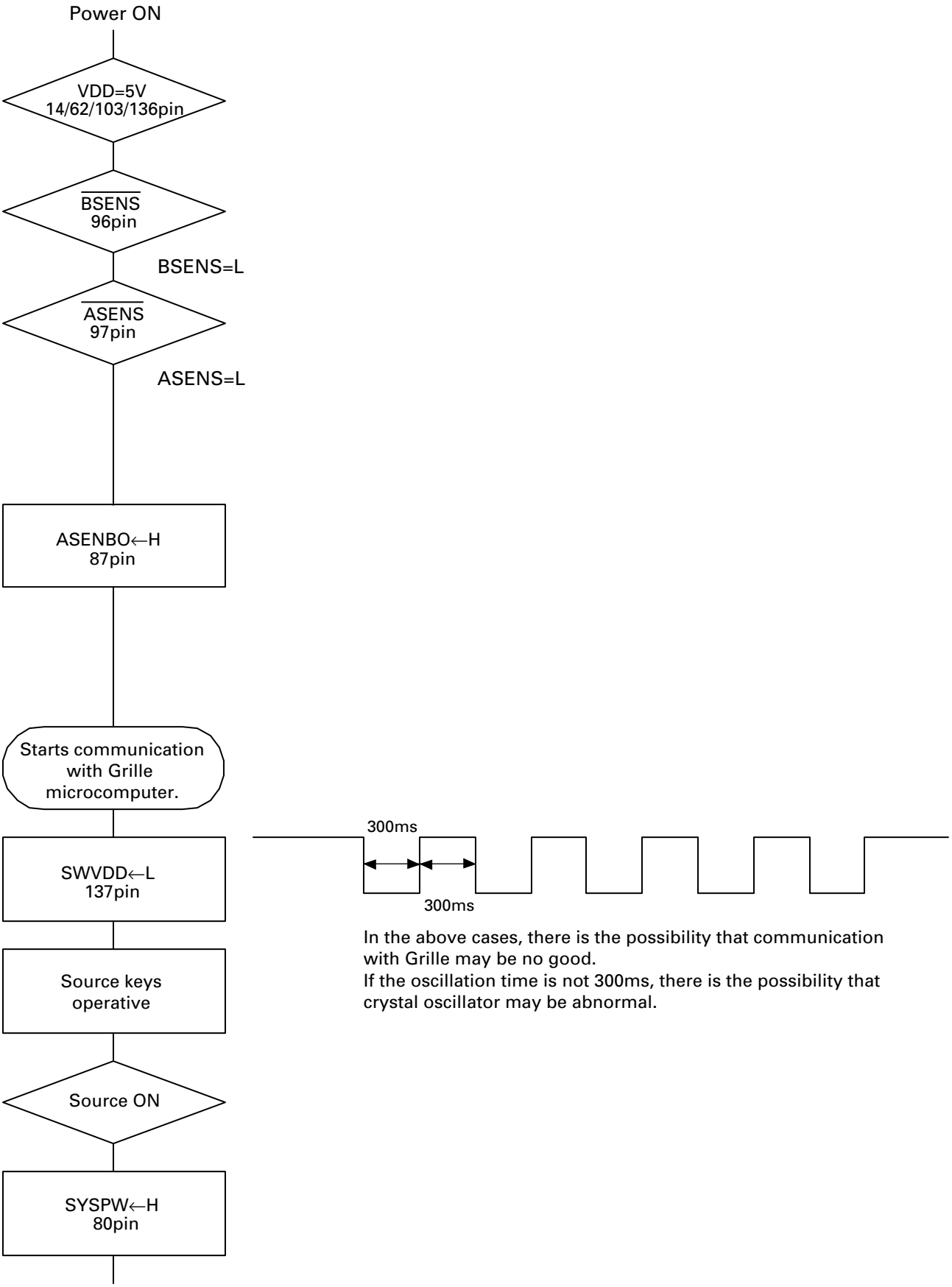
● CAW1593




COM 0A
COM 1C
COM 2C
COM 3C
COM 2B
COM 1B
COM 3B
COM 4B
COM 5B
COM 6B
COM 7B
COM 0A
COM 1A
COM 2A
COM 3A
COM 4A
COM 5A
COM 6A
COM 7A
COM 1E
COM 2E
COM 3E
COM 7E
COM 5E
COM 6E
COM 4D
COM 7F
COM 4E
COM 5F
COM 2F
COM 6F
COM 5G
COM 4F
COM 1D
COM 2D
COM 3D
COM 4C
COM 5C
COM 6C
COM 7C
COM 0E
COM 0D
COM 0C
COM 0B
COM 7D
COM 6D
COM 5D
COM 0A
COM 3F
COM 1F
COM 0F
ON
SEEK
TRK
SEL
FF
REW
DISC
CH
OFF
DIGITAL
OCTAVER
TOC W RENT DISC TRACK
MD
TOTAL RPT DISC
ON AIR
MULTI
CD MD
REC
CUSTOM
DISC CH TRK
MS
USW

COMMON

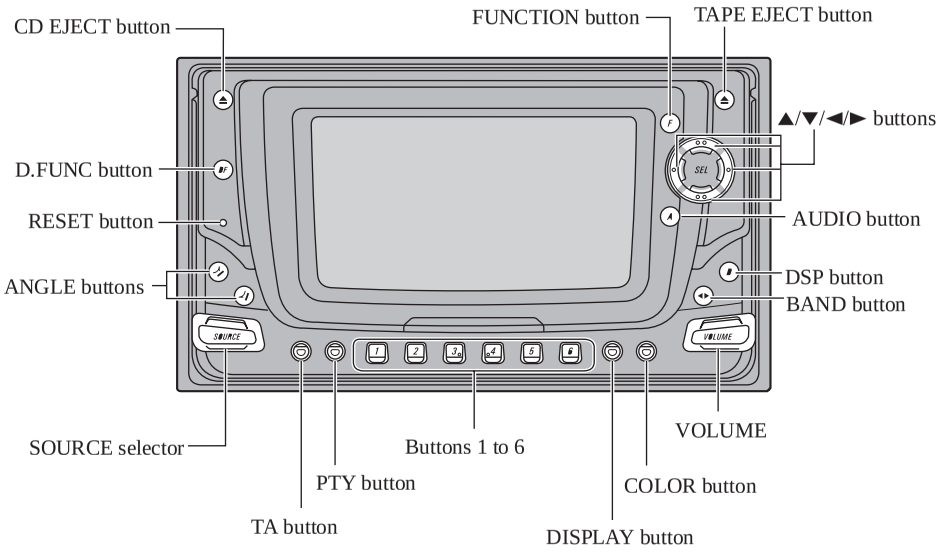
7.3 OPERATIONAL FLOW CHART



● (FH-P6600R/EW)

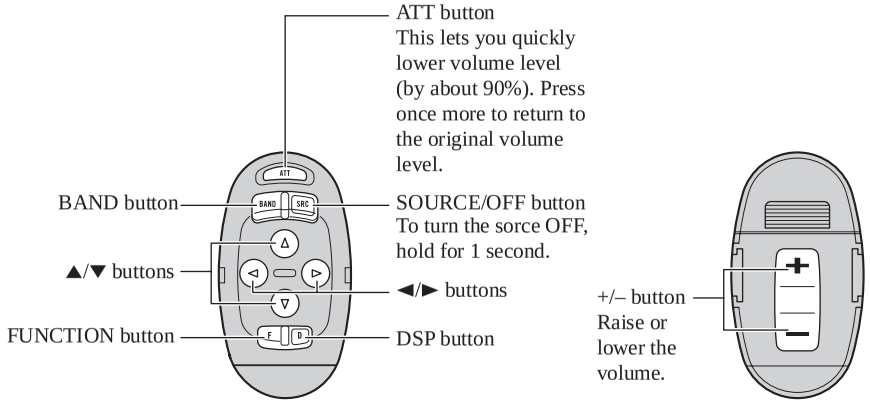
Key Finder

Head Unit (Close)

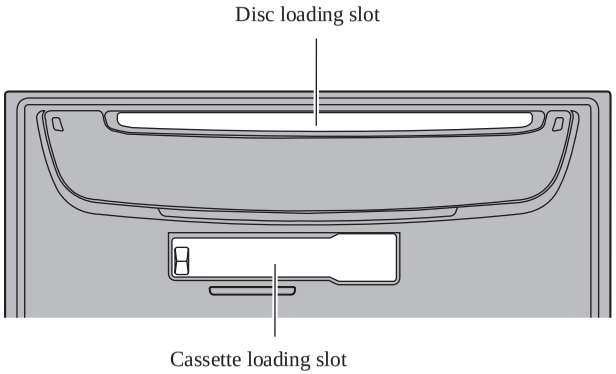


Steering Remote Controller

A steering remote controller that enables remote operation of the head unit is supplied. Operation is the same as when using buttons on the head unit.


ATT button
This lets you quickly lower volume level (by about 90%). Press once more to return to the original volume level.
BAND button
SOURCE/OFF button
To turn the sorce OFF, hold for 1 second.
▲/▼ buttons
◄/► buttons
FUNCTION button
DSP button
+/– button
Raise or lower the volume.

Head Unit (Open)



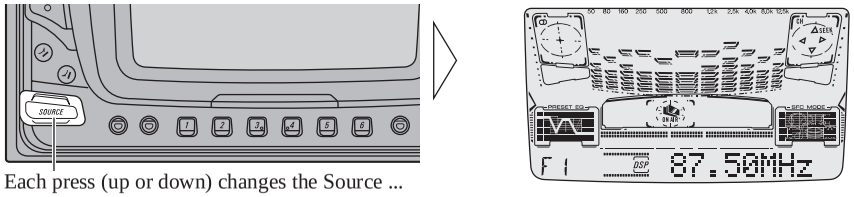
Basic Operation

To Listen to Music

The following explains the initial operations required before you can listen to music.

Note:
- Loading a disc in this product.
- Loading a cassette tape in this product.

1. Select the desired source.



Each press (up or down) changes the Source ...

■ Head Unit

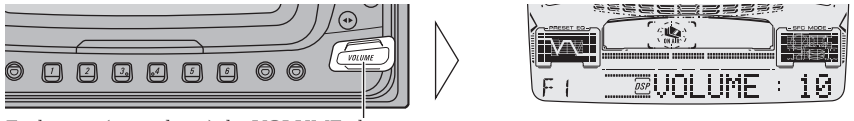
Each press (up or down) of the SOURCE selector selects the desired source in the following order:
Built-in CD player ↔ TV ↔ Tuner ↔ Cassette player ↔ Multi-MD player ↔ Multi-CD player ↔ External Unit 1 ↔ External Unit 2 ↔ AUX ↔ Sources OFF

■ Steering Remote Controller

Each press of the SOURCE button selects the desired source in the following order:
Built-in CD player → TV → Tuner → Cassette player → Multi-MD player → Multi-CD player → External Unit 1 → External Unit 2 → AUX

Note:
- External Unit refers to a Pioneer product (such as one available in the future) that, although incompatible as a source, enables control of basic functions by this product. Two External Units can be controlled by this product, although “External” is displayed whether you select External Unit 1 or External Unit 2. When two External Units are connected, the allocation of them to External Unit 1 or External Unit 2 is automatically set by this product.
- In the following cases, the sound source will not change:
  * When a product corresponding to each source is not connected to this product.
  * No disc is set in this product.
  * No tape is set in this product.
  * No magazine is set in the Multi-CD player.
  * No disc is set in the Multi-MD player.
  * AUX (external input) is set to OFF.
- When this product’s blue/white lead is connected to the car’s Auto-antenna relay control terminal, the car’s Auto-antenna extends when this product’s source is switched ON. To retract the antenna, switch the source OFF.

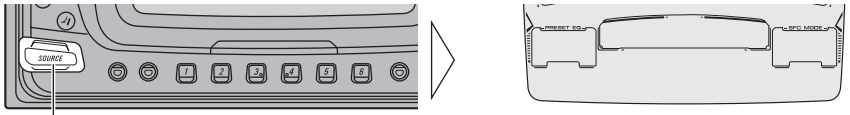
2. Raise or lower the volume.



Each press (up or down) the VOLUME changes the volume level.

Note:
- Press upward to raise the volume level.
- Press downward to lower the volume level.

3. Turn the source OFF.

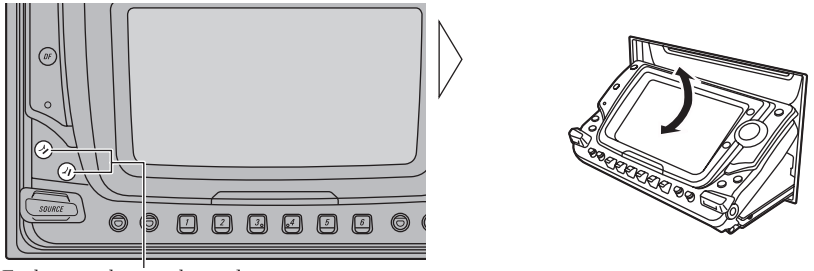


Press (up or down) the SOURCE selector and turn the source OFF.

Setting the Display Angle

You can adjust front panel angle for easier operation.

- **Select the desired angle.**



Each press changes the angle.

Note:
- While a disc or a cassette is left partially inserted, you cannot operate the ANGLE button.
- By pressing the ANGLE button for 2 seconds, you can open or close the front panel automatically.

⚠ WARNING:
- Do not use with the front panel left open. If you do leave it open, it may result in injury in the event of an accident.
- Be careful not to catch your finger in the front panel when it is opening or closing.

Basic Operation of Built-in CD Player

Open/Eject

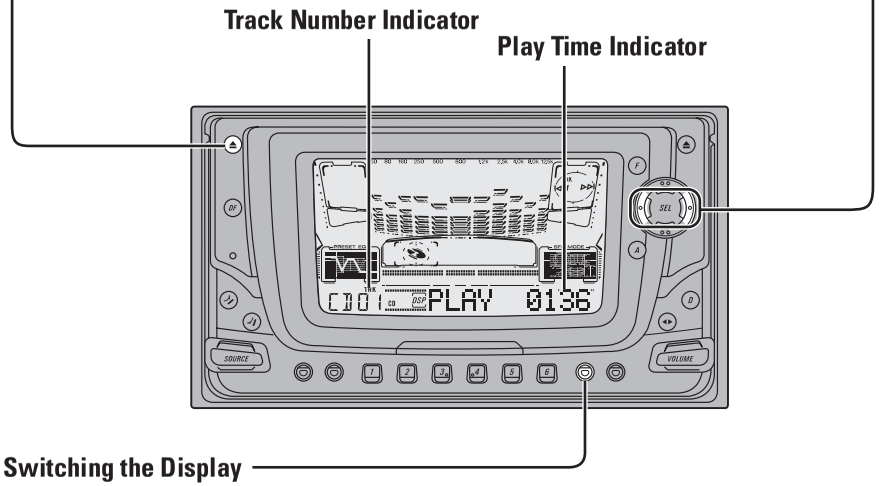
Press the CD EJECT button, and the front panel opens, then the disc is ejected.
When a CD is not inserted, by pressing the CD EJECT button, you can open or close the front panel alternately.

Note:
- The CD function can be turned ON/OFF with the disc remaining in this product.
- A disc left partially inserted after ejection may incur damage or fall out.

Track Search and Fast Forward/Reverse

- **You can select between Track Search or Fast forward/Reverse by pressing the ◄/► button for a different length of time.**

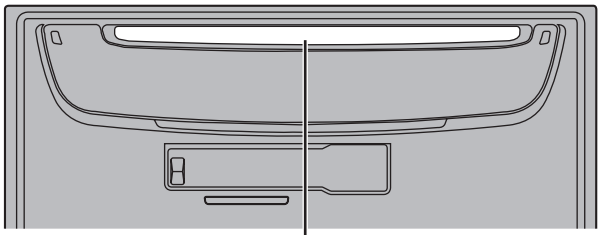
Track Search	0.5 seconds or less
Fast forward/Reverse	Continue pressing



Switching the Display

Each press of the DISPLAY button changes the display in the following order:
Playback mode (Play Time) → Disc Title (DISC TITLE)

Note:
- If you switch a display when the disc title has not been input, “NO TITLE” is displayed.
- When playing a CD TEXT disc, refer to “Title Display Switching” and “Title Scroll”.
- A CD TEXT disc is a CD featuring recorded text information such as Disc Title, Artist Name and Track Title.



Disc Loading Slot

If a CD is inserted, the front panel is closed automatically.

Note:
- The Built-in CD player plays one standard 12 cm or 8 cm (single) CD at a time. Do not use an adapter when playing 8 cm CD.

Note:
- If a disc cannot be inserted fully or playback fails, make sure the recorded side is down. Push the CD EJECT button and check the disc for damage before reinserting it.
- If the Built-in CD player cannot operate properly, an error message (such as “ERROR-14”) appears on the display. Refer to “Built-in CD Player’s Error Message”.

⚠WARNING:

- Do not use with the front panel left open. If you do leave it open, it may result in injury in the event of an accident.

Basic Operation of Cassette Player

Note:
- Be sure to close the front panel after loading or ejecting a cassette.

Open/Eject

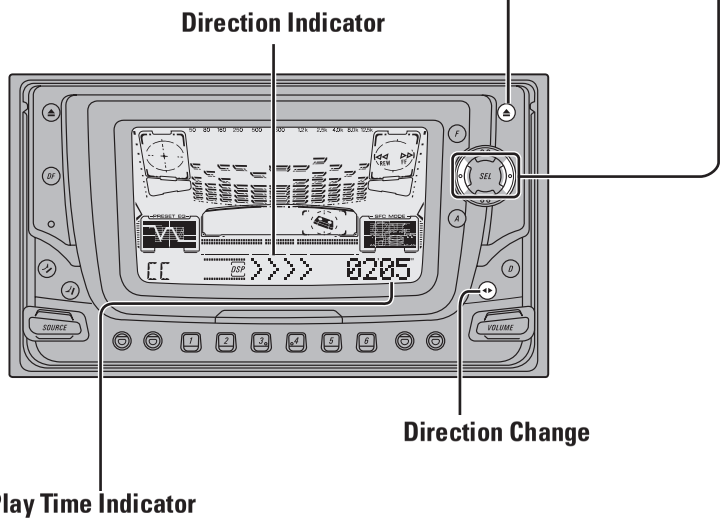
Press the TAPE EJECT button, and the front panel opens, then the tape is ejected.
When a cassette tape is not inserted, by pressing the TAPE EJECT button, you can open or close the front panel alternately.

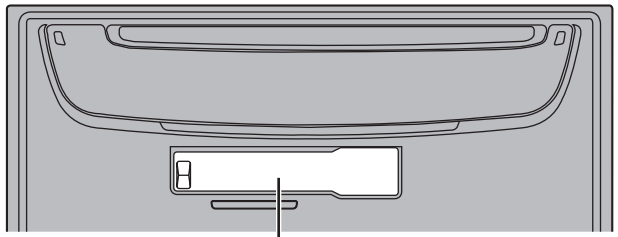
Note:
- The Tape function can be turned ON/OFF with the cassette tape remaining in this product.

Fast Forward/Rewind and Music Search

- **Each press of the ► button selects Fast Forward or Forward-Music Search.**
  FF (Fast Forward) → F-MS (Forward-Music Search) → Normal Playback
- **Each press of the ◄ button selects Rewind or Rewind-Music Search.**
  REW (Rewind) → R-MS (Rewind-Music Search) → Normal Playback

Note:
- Fast Forward/Rewind and Music Search can be canceled by pressing the BAND button.





If a cassette tape is inserted, the front panel is closed automatically.

Note:
- Indicator “METAL” lights when a metal or chrome tape is inserted. Nothing is displayed for a normal tape.

Note:
- The continuous playback time count starts at “00'00"” at the following times.
  * When a tape is inserted.
  * When the tape direction is changed.
  * When you rewind the tape side currently playing back to the beginning.
- The continuous playback time count is halted when fast-forwarding/rewinding and while the Music Search function is operating.

⚠WARNING:
- Do not use with the front panel left open. If you do leave it open, it may result in injury in the event of an accident.

Basic Operation of Tuner

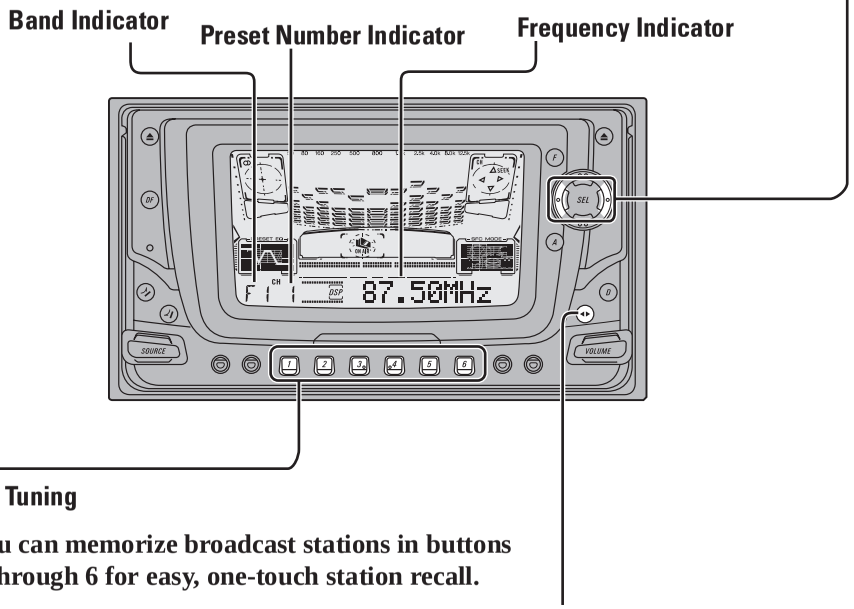
This product's AF function can be switched ON and OFF. AF should be switched OFF for normal tuning operations.

Manual and Seek Tuning

- **You can select the tuning method by changing the length of time you press the ◄/► button.**

Manual Tuning (step by step)	0.5 seconds or less
Seek Tuning	0.5 seconds or more

Note:
- If you continue pressing the button for longer than 0.5 seconds, you can skip broadcasting stations. Seek Tuning starts as soon as you release the button.
- Stereo indicator "◯◯" lights when a stereo station is selected.



- **You can memorize broadcast stations in buttons 1 through 6 for easy, one-touch station recall.**

Preset station recall	2 seconds or less
Broadcast station preset memory	2 seconds or more

Note:
- Up to 18 FM stations (6 in F1 (FM1), F2 (FM2) and F3 (FM3)) and 6 MW/LW stations can be stored in memory.
- You can also use the ▲ or ▼ buttons to recall broadcast stations memorized in buttons 1 through 6.

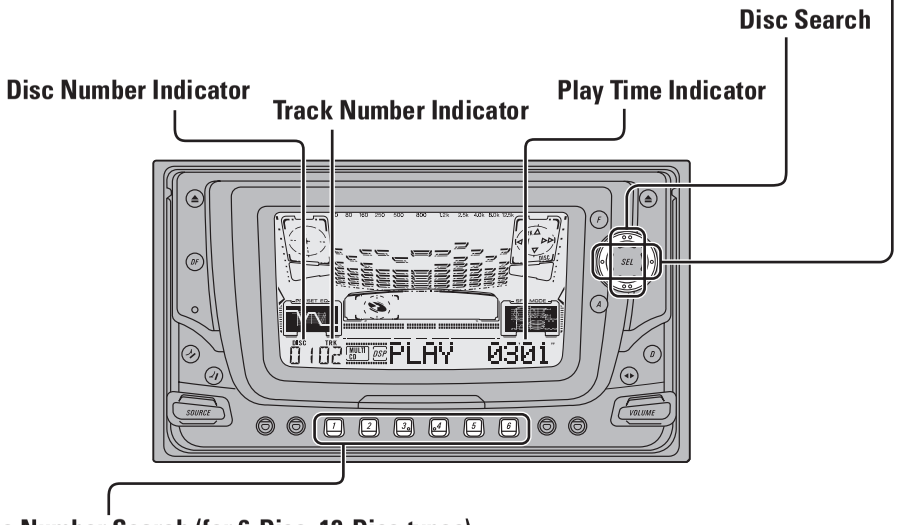
Basic Operation of Multi-CD Player

This product can control a Multi-CD player (sold separately).

Track Search and Fast Forward/Reverse

- **You can select between Track Search or Fast forward/Reverse by pressing the ◄/► button for a different length of time.**

Track Search	0.5 seconds or less
Fast Forward/Reverse	Continue pressing

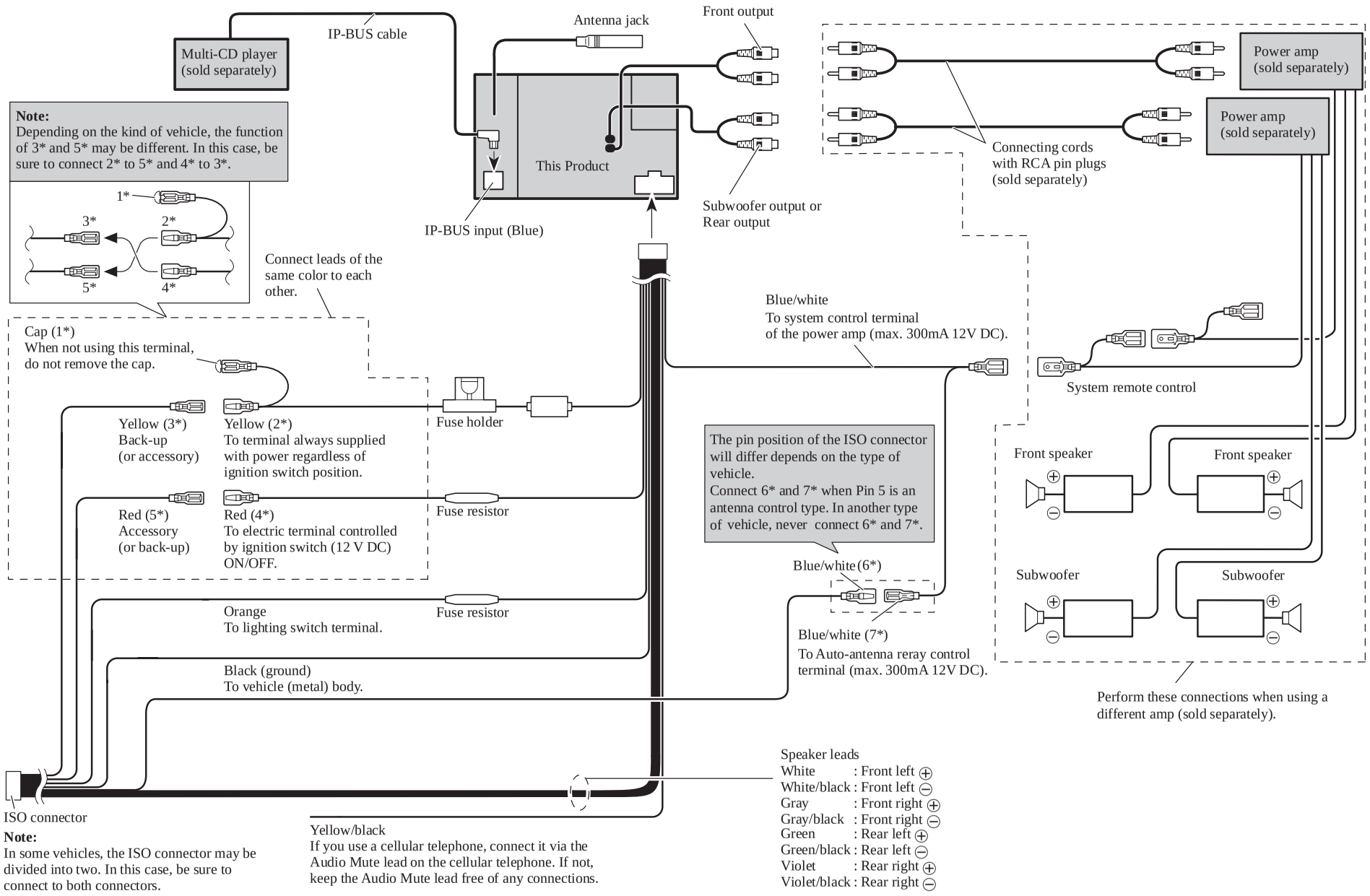


- **You can select discs directly with the 1 to 6 buttons. Just press the number corresponding to the disc you want to listen to.**

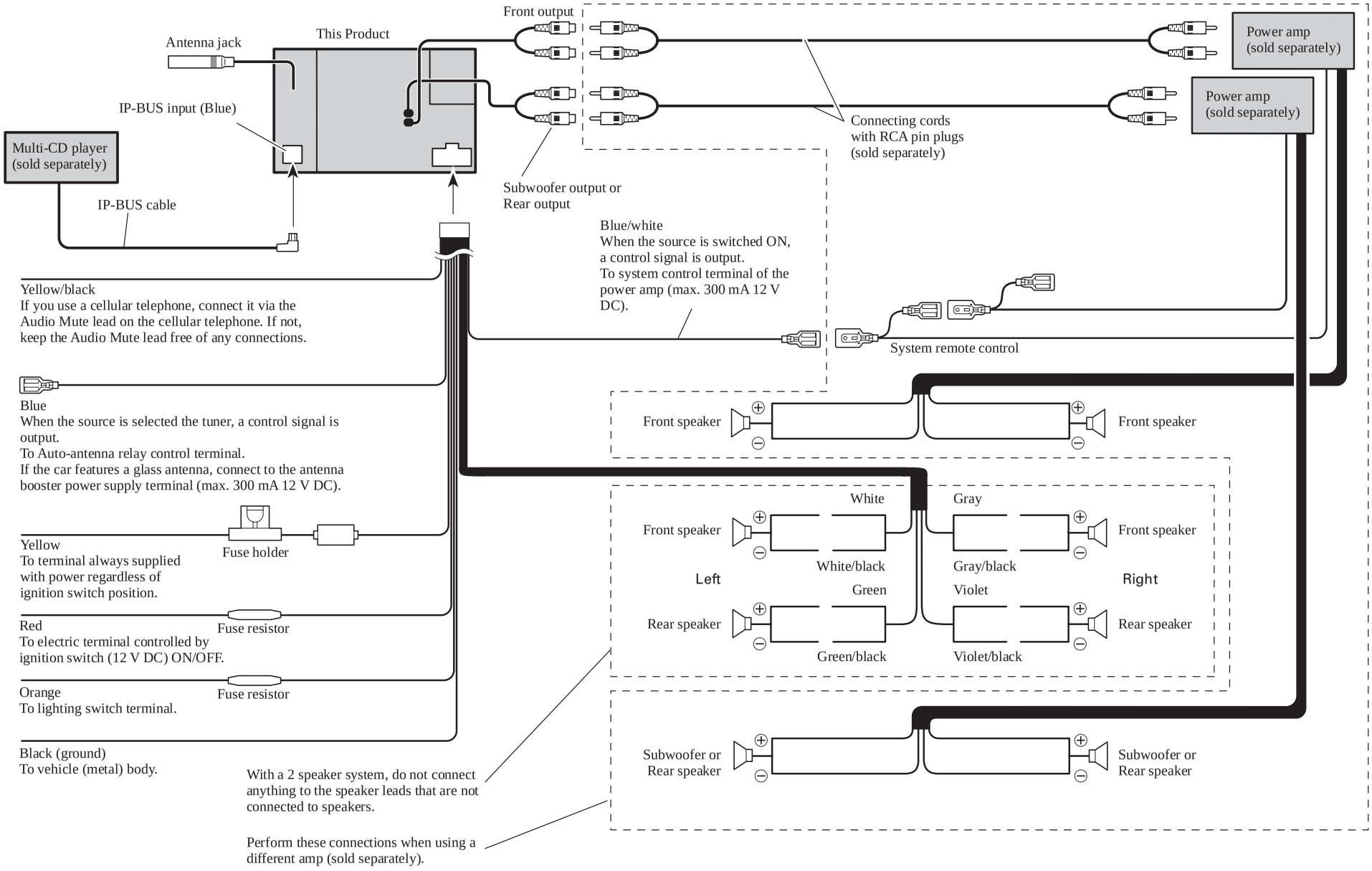
Note:
- When a 12-Disc Multi-CD Player is connected and you want to select disc 7 to 12, press the 1 to 6 buttons for 2 seconds.

Note:
- The Multi-CD player may perform a preparatory operation, such as verifying the presence of a disc or reading disc information, when the power is turned ON or a new disc is selected for playback. "READY" is displayed.
- If the Multi-CD player cannot operate properly, an error message such as "ERROR-14" is displayed. Refer to the Multi-CD player owner's manual.
- If there are no discs in the Multi-CD player magazine, "NO DISC" is displayed.

● (FH-P6600R/EW)


Multi-CD player
(sold separately)
IP-BUS cable
Antenna jack
Front output
This Product
IP-BUS input (Blue)
Subwoofer output or
Rear output
Power amp
(sold separately)
Power amp
(sold separately)
Connecting cords
with RCA pin plugs
(sold separately)
Note:
Depending on the kind of vehicle, the function of 3* and 5* may be different. In this case, be sure to connect 2* to 5* and 4* to 3*.
1*
2*
3*
4*
5*
Connect leads of the same color to each other.
Cap (1*)
When not using this terminal, do not remove the cap.
Blue/white
To system control terminal
of the power amp (max. 300mA 12V DC).
System remote control
Yellow (3*)
Back-up
(or accessory)
Yellow (2*)
To terminal always supplied with power regardless of ignition switch position.
Fuse holder
The pin position of the ISO connector will differ depends on the type of vehicle.
Connect 6* and 7* when Pin 5 is an antenna control type. In another type of vehicle, never connect 6* and 7*.
Front speaker
Front speaker
Red (5*)
Accessory
(or back-up)
Red (4*)
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
Fuse resistor
Blue/white (6*)
Subwoofer
Subwoofer
Orange
To lighting switch terminal.
Fuse resistor
Blue/white (7*)
To Auto-antenna reray control terminal (max. 300mA 12V DC).
Black (ground)
To vehicle (metal) body.
Perform these connections when using a different amp (sold separately).
Speaker leads
White : Front left ⊕
White/black : Front left ⊖
Gray : Front right ⊕
Gray/black : Front right ⊖
Green : Rear left ⊕
Green/black : Rear left ⊖
Violet : Rear right ⊕
Violet/black : Rear right ⊖
ISO connector
Note:
In some vehicles, the ISO connector may be divided into two. In this case, be sure to connect to both connectors.
Yellow/black
If you use a cellular telephone, connect it via the Audio Mute lead on the cellular telephone. If not, keep the Audio Mute lead free of any connections.

● (FH-P6600/ES)


Front output
This Product
Antenna jack
IP-BUS input (Blue)
Multi-CD player
(sold separately)
IP-BUS cable
Power amp
(sold separately)
Power amp
(sold separately)
Connecting cords
with RCA pin plugs
(sold separately)
Subwoofer output or
Rear output
Blue/white
When the source is switched ON,
a control signal is output.
To system control terminal of the
power amp (max. 300 mA 12 V
DC).
System remote control
Yellow/black
If you use a cellular telephone, connect it via the
Audio Mute lead on the cellular telephone. If not,
keep the Audio Mute lead free of any connections.
Blue
When the source is selected the tuner, a control signal is
output.
To Auto-antenna relay control terminal.
If the car features a glass antenna, connect to the antenna
booster power supply terminal (max. 300 mA 12 V DC).
Front speaker
Front speaker
Yellow
To terminal always supplied
with power regardless of
ignition switch position.
Fuse holder
White
Gray
Front speaker
Front speaker
White/black
Gray/black
Left
Right
Green
Violet
Rear speaker
Rear speaker
Green/black
Violet/black
Red
To electric terminal controlled by
ignition switch (12 V DC) ON/OFF.
Fuse resistor
Orange
To lighting switch terminal.
Fuse resistor
Black (ground)
To vehicle (metal) body.
Subwoofer or
Rear speaker
Subwoofer or
Rear speaker
With a 2 speaker system, do not connect
anything to the speaker leads that are not
connected to speakers.
Perform these connections when using a
different amp (sold separately).

8.2 SPECIFICATIONS

General

Power source ..... 14.4 V DC (10.8 – 15.1 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A
Dimensions
(mounting size) .... 178 (W) × 100 (H) × 160 (D) mm
(front face) ..... 170 (W) × 95 (H) × 18 (D) mm
Weight ..... 3.0 kg

Audio/DSP(FH-P6600R/EW)

Maximum power output ..... 45 W × 4
Continuous power output ..... 27 W × 4
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout maximum output level/
output impedance ..... 2 V/1 kΩ
Loudness contour ..... +10 dB (100 Hz), +7 dB (10 kHz)
(volume: –30 dB)
Equalizer (11-Band Graphic Equalizer)
Frequency ..... 50/80/160/250/500/800 Hz
1.2/2.5/4/8/12.5 kHz
Equalization range ..... ±12 dB
HPF
Frequency ..... 50/80/125 Hz
Slope ..... –12 dB/oct.
Subwoofer output
Frequency ..... 50/80/125 Hz
Slope ..... –18 dB/oct.
Gain ..... ±6 dB
Phase ..... Normal/Reverse

Audio/DSP(FH-P6600/ES)

Continuous power output is 22 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output ..... 45 W × 4
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout maximum output level/
output impedance ..... 2 V/1 kΩ
Loudness contour ..... +10 dB (100 Hz), +7 dB (10 kHz)
(volume: –30 dB)
Equalizer (11-Band Graphic Equalizer)
Frequency ..... 50/80/160/250/500/800 Hz
1.2/2.5/4/8/12.5 kHz
Equalization range ..... ±12 dB
HPF
Frequency ..... 50/80/125 Hz
Slope ..... –12 dB/oct.
Subwoofer output
Frequency ..... 50/80/125 Hz
Slope ..... –18 dB/oct.
Gain ..... ±12 dB

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format ..... Sampling frequency: 44.1 kHz
Number of quantization bits: 16; linear
Frequency characteristics ..... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio ..... 94 dB (1 kHz) (IEC-A network)
Dynamic range ..... 92 dB (1 kHz)
Number of channels ..... 2 (stereo)

Cassette player

Tape ..... Compact cassette tape (C-30 – C-90)
Tape speed ..... 4.76 cm/sec.(+0.14cm/sec.,–0.05cm/sec.)
Fast forward/rewinding time .... Approx. 100 sec. for C-60
Wow & flutter ..... 0.09% (WRMS)
Frequency response ..... Metal: 30 – 19,000 Hz (±3 dB)
Stereo separation ..... 50 dB
Signal-to-noise ratio
..... Metal: Dolby B NR IN: 67 dB (IEC-A network)
Dolby NR OUT: 61 dB (IEC-A network)

FM tuner

Frequency range ..... 87.5 – 108 MHz
Usable sensitivity ..... 10 dBf
(1.0 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 15 dBf
(1.7 µV/75 Ω, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

MW tuner(FH-P6600R/EW)

Frequency range ..... 531 – 1602 kHz (9 kHz)
Usable sensitivity ..... 18 µV (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

LW tuner(FH-P6600R/EW)

Frequency range ..... 153 – 281 kHz
Usable sensitivity ..... 30 µV (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

AM tuner(FH-P6600/ES)

Frequency range ..... 531 – 1,602 kHz (9 kHz)
530 – 1,640 kHz (10 kHz)
Usable sensitivity ..... 18 µV (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)
50 dB (±10 kHz)

Note:

- Specifications and the design are subject to possible modification without notice due to improvements.